

Still Alive With Sir Clive!

# ZXir QLive Alive!

The Timex/Sinclair North American User Groups Newsletter

Volume 8 No. 2

Summer '98

Chairman

Donald S. Lambert

Auburn, IN

## MEMORY MAP

### ROUTINES

#### ADDRESS

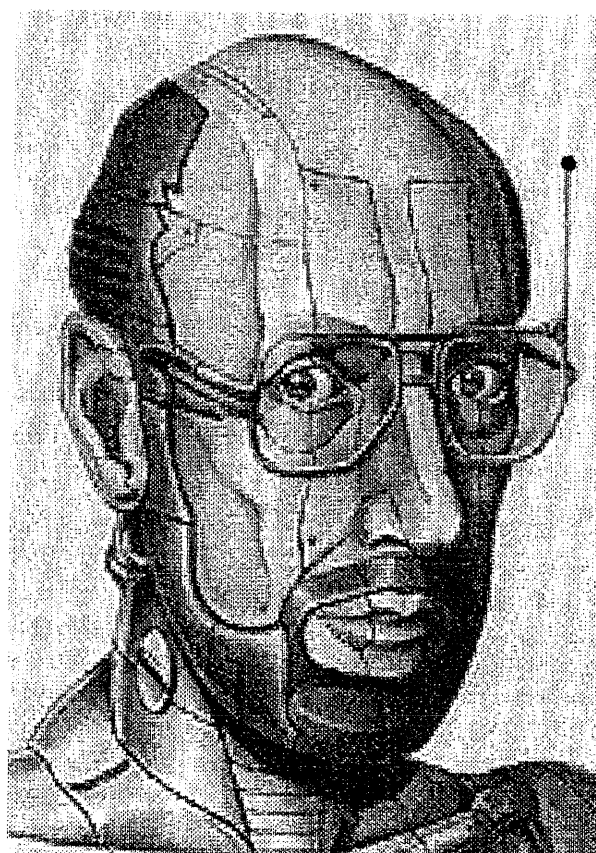
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Sir Cyber Sinclair



*The Ramtop*

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ESTABLISHED 1991 THE TIMEX/SINCLAIR NORTH AMERICAN USER GROUPS NEWSLETTER

# T/SNUG Information

We wish to support the following platforms : ZX-80/81, TS-1000, Spectrum, TS-2068, Z88 and QL. If you have any questions about any of these fine Sinclairs, contact the:

## Chairman

Chief Motivator  
Donald S. Lambert (ISTUG)

## Vice-Chairmen

### Tape & JLO PD Library

D. G. Smith  
415 Stone St.  
Johnstown, PA 15906  
814 535-6998

### Z88 Library

Dave Bennett (HATSUG)  
1275 Timber View Dr.  
Mechanicsburg, PA 17055-9146  
717 732-4374

### QL Hacker's Journal

Timothy Swenson  
38725 Lexington St.  
Fremont, CA 94536  
swensontc@geocities.com

### TS-2068

Rod Humphreys (VSUG)  
10984 Collins Pl.  
Delta, BC V4C 7E6 Canada  
604 583-2819

### QL PD Library

John Donaldson (CATUG)  
835 Foxwood Cir.  
Geneva, IL 60134-1631  
630 232-6147

### AERCO & Z80 Emulator

Keith Watson  
41634 Amberly Dr.  
Mt. Clemens, MI 48038

### BBS --==GATOR==--

Bob Swoger (CATUG)  
613 Parkside Cir.  
Streamwood, IL 60107-1647  
630 837-7957 Work 847 576-8068

Any of the above can also be reached by E-Mail through the  
**Club BBS 847 632-5558**

## ZXir QLive Alive!

Is the newsletter of T/SNUG, the Timex/Sinclair North American User Groups, providing news and software support to the T/S community in a **VOLUME** of four newsletters per year, beginning with the Spring (March) issue.

**T/SNUG's main goal is to preserve and encourage the use of Sinclair computers by providing an open forum for the exchange of knowledge, building and maintaining of software libraries. Providing vendors, repair service and members with free ad space.**

It is the user groups and individual subscribers, rather than the vendors, that provide the pecuniary support for this newsletter. Vendors and developers receive this newsletter free of charge, though contribution from vendors and user groups is gratefully accepted. Please support our vendors and service providers whenever possible.

If you have a problem or you have solved a problem, please share it with the rest of us. No problem will be considered unimportant.

## Editor/Treasurer Publisher

Larken PD Library

You can keep T/SNUG alive by an annual contribution of \$12 for one VOLUME made payable to Abed Kahale. Send check to:-

**ABED KAHALE**  
3343 S FLAT ROCK CT  
SIERRA VISTA AZ 85635-6874  
520 378-3424

**Back copies are available for \$1.00 each postpaid.**

## Trea\$ury Note\$

As of June 5, 1998, we have a balance of \$892.54

## Article Contributions

Send in your articles by tape or disk and your inputs to:-

**DONALD S LAMBERT**  
1301 KIBLINGER PL  
AUBURN IN 46706-3010  
Phone 219 925-1372

By hardcopy, MSDOS or modem (.3-33 6) to:

Abed Kahale

E-mail: AKahale@compuserve.com

## WELCOME

*Jack Boatwright*

*Andrew Dansby*

*John Franke*

*Terry Jones*

## GATOR'S

### Twisted Pair

To better inform the Sinclair Community, four 24-hour a day BBSs are now provided to serve you. You are encouraged to exchange mail and use the files sections of these boards. Bulletins and ads are available to all.

**Q-Box BBS 810 254-9878**

Utica, Michigan

**SCC Sever Jose Moreno**

<http://members.tripod.com/~helpme/>

**SOL BBS 520 882-0388**

Tucson, Arizona

**Club BBS 847 632-5558**

Arlington Heights, Illinois

If you know the Internet E-Mail address of a Sinclair user, but do not have access to Internet, simply address your E-Mail to GATOR Sinclair on the 24-hour Club BBS and include the name and E-Mail address of the user you wish to reach. Then check the Club BBS from time to time if you expect a reply.

We encourage you to exchange mail and contribute to the UPLOAD section. Call and register using your first, last name and phone number along with a password you won't forget. **Write It Down!** Do not try to do anything else at this time.

When you call-in the next time, you will have Level 5 security and be able to enjoy full user privileges. The BBS has smaller sections called conferences. Select "J" for "Join a Conference". Select "TIMEX" to get into the Sinclair Section. The mail you then read will only be from other T/S users. Use extension ART for articles, ADS for ads and .NWS for news when UPLOADing.

For help, contact the SYSOP, Bob Swoger, by leaving a message, mail, E-Mail or phone.

CENG108@email.mot.com

# Input/Output

by *Abed Kahale*

I was at Rod's yesterday and picked up quite a lot of items. He indicated that there was some sort of problem with the Cleveland stuff and sent a lot of it along with me. I haven't had time to inventory anything and hopefully can get that done before the Summer issue of ZQA! Some of the things I remember from loading are books, books, and more books, 100's of TS1000 tapes (Timex & Softsync mostly), 2 monitors (green screen), a few boxed TS1000's, a few 16K RAM Packs, 2 boxes of magazines & newsletters and 15 or 20 disk drives and more. I took our minivan over because of rain and brought back about 75 cubic feet of full boxes. He will call me after the rest of the 2068 items are sent and I will pick up anything that is still there, plus the schematics and files he has.

I told Rod that I would ship anything to whoever wanted it for the cost of shipping. He suggested that I add 10% to cover cost of materials involved in the shipping (tape, packaging, etc.). That sounds reasonable.

Anyway, I thought I would let you know that I have picked up some of the items and they are available now. If someone wants to email me with a request, I will look for that specifically until I get everything cataloged. I can be contacted by phone (541-389-7353), SASE (67325 Fryrear Rd., Bend, OR 97701) or email Take care,

Jack (Boatwright) (jboatno4@outlawnet.com).

From: Michael Henderlight

I am potentially interested in signing my son up for the T/SNUG. He is a 10 year old who thinks Timex/Sinclairs rule...I was told that if I e-mailed you and asked, that you would send me a free copy of the newsletter "ZXir QLive Alive" for evaluation to see the kind of information that it contains. Is this true? And could you give me more information on the User Group like dues, etc.? Thanks.

Justin Henderlight  
8224 NE 125th Court  
Kirkland, WA 98034

<mikehend@MICROSOFT.com>

Abed,

Yes, NoBuddy needs it more than Slick. Really never mastered the Z88 so use it for Diary often and for Alarm frequently but did not like Basic nor spreadsheet/Wordpro. My Smith-Corona dedicated word processor is only 100 Xs better. I actually own all the best books on Z88 and additional programs on EPROM, etc. but too many superior devices at hand. Still, I did visit the netpage in the UK and will again. My problem with the Z88 is that the highest fervor from TS/Spec user groups and newsletters had passed by the time the Z88 came out and like a child, I always need motivating because have legions of hobbies. Thank you kindly for positive words about my programming. The skill becomes very idiosyncratic within short time. I always LIST progs and am astounded how much we all differ in problem-solutions and even mini-modules we use for userizing the barebones beginnings. Thank you especially for e-mailing me frequently cuz of

course, it is motivating me to learn how. The time it must take you to foster all of us! All that + newsletter.

Harriet (Joan) Kealy

Dear Abed:

In regards to Al Feng's letter on the intrinsic value of a TS2068, he says, "Internet access is the 'hot' area of computing... maybe you should write something for ZQA!" So, don't you think now would be a good time to run that article I last submitted, on surfing the net via 2068?

KEEP ON TIMEX 'n

David E. Lassov: sysop, SOL BBS @520-882-0388  
520-882-3972 (voice) emanon@azstarnet.com (email)

Abed,

You guys did well on that project, esp to give preference to TS2068, my favorite TS computer though I also own the 1000 and Z88. I also was dubious about how there could be \$1000 worth of shipping cost there, but it has all worked out fine with Boatwright also rescuing materials.

About the composite color monitor--that's the kind I have--Magnavox--it has required servicing once when it was only slightly over a year old for my adjusting clear out of visibility, once back to the factory under warranty, and once repaired by Radio Shack's central repair facility in Fort Worth. It is about due, I fear, and I must say that Radio Shack's bunch did a marvelous job for \$100 about 4 years ago--yep, it is over 10 years old. What to do next? Can we still run these TS2068s off of TVs or has the technology been changed radically since 1983?? Would you believe I have a 17" RCA TV of 15 yr. age that will also run my 2068's? You might suggest to folks who find no composite or RGB monitors that a big colored TV from 1980s gives a good enough picture with some difficulty reading fine print on TASWORD being the only drawback. Thanks for your work to keep our "stuff" out of landfill.

Harriet J Kealy

Hi Abed,

Oh, yeah. I forgot....I also have about 11 cases of TS2040 Printer paper. Need some?

I re-counted and there is only 9 cases of paper. 2 of them are for the TI 700 Silent Printer (same paper as the 2040 but twice as long, Rod cut them in half for his customers. I may post them in the TI newsgroup to see if any TI folks want them.

I'm trying to find a Manismann Tally-Spirit 80 or a Legend 880. I understand that if Timex had stayed in business, they would have been the TS2080. So I decided to make my own 2080. Find one of the same printers, spray paint it silver, and fake a logo. I suppose other people have done it before me.

*Good luck on moving the stuff.*

I've been formulating a plan. Once I get it finalized I'll share it with you. One of the problems I can foresee is that I have a lot of TS stuff of my own and it could be hard to keep it separated from the stuff I got from Rod.

*Did you ask Rod what happened to the Larkens he had on the list he sent me?*

No, I didn't think of it. I was too busy packing and loading boxes. I spent 4 hours at his place, then had a 4 1/2 hour drive home. I'll give him a call one of these days and ask

The LarKen I bought didn't work, both boards were out on it and the 2068 they were hooked up to was bad too. I'm wondering if the guy had a power spike or something. I hope not because there were a few other things hooked up to it that I haven't had a chance to check out yet. I sent all the LarKen boards and the 2068 to Computer Classics last week for overhaul. I can't wait until I get them back!!! (I sent the RAM Disk too, just in case there was something wrong with it.)

I was reading an article in Time Designs, Vol. 1, no. 1 about the plans that Timex once had for the 2068. Too bad they didn't get the Bus Expansion Unit out before they quit. That would have been something, if everything in the article was really in it. I wonder if Timex had a prototype of it, or schematics? Take care, Jack

Hi Abed,

I talked to Rod this morning about the Larken. All he has is the disk controller board, but no LKDOS cart. He said that it was a mistake on his list and that he had a couple of other mistakes, too. He also said he had talked to Bob S. and given him a list of items that he didn't have that were on the list. Take care, Jack

Dear Abed :

There are at least two sources in Tucson of used composite monitors for the TS2068. Ten dollars gets the monochrome Magnavox, whereas fifty gets you a color monitor for the Apple II. The market is flooded by those monitors right now, and they both work fine with my 2068s.

David E. Lassov: sysop,

Hi Abed,

BTW, I posted the 2 cases of TI printer paper on usenet and got a taker! Same deal as the Timex stuff...the cost of shipping, plus 10%. I still have 7+ cases of 2040 paper so the supply should last for a while. Take care,

Jack Boatwright

Hi Abed,

Just wanted to take a moment to publicly thank:

- Fred Henn for getting me a manual for the Memotech Centronics I/F.
- Peter Liebert-Adelt who was going to make copies of his manual and send it to me from Germany.
- Fred Stern for all the help he has given me getting my ZX81 and disk interface going.
- Don Lambert for his letter and info on the Larken interface
- Rod Gowen for getting me re-connected to the TS community
- And you my friend, for sending me the copy of the OS-64 manual. A BIG Thanks!

Jack Boatwright

Dear Abed,

First: Thank You for the 3 Email "humors". AND a look into the future: Peter Liebert-Adelt (Germany) has requested the Memotech I/F, some books, and magazines

that you kindly adv. in your newsletter ... so I'll submit a revised list, of what I still have, shortly

Sinclairly Yours,  
Fred Henn

Re: Sunset Electronics

It's too bad. I was looking through one of their 1985 catalogs...they had some interesting items and I was hoping they might still have some. Before taking them off the listing maybe we should ask if anyone has had dealings with them recently, it could be that they just moved to a new location. Does anyone know the name(s) of the owner(s)? I would be happy to try to track them down.

Jack

Dear Abed,

Thanks for the email. Have to be a bit short because I am doing a mailshot to invite people for the upcoming Eindhoven QL show, and it has to be ready by this evening.

> Al Feng informed me about your interest in sending ads to ZQA! Yes.

> You can send ads and/or articles. Ads are for free and articles are welcomed. I do have an old ad for QL Today that you mailed me, but a new one is welcomed.

Okay, will do.

> You can attach almost anything to your email. .GIF, .JPG, .PCX or any other graphics format. Either UUE or MIME is accepted by CompuServe.

Fine, I guess, Netscape attaches with MIME.

Kind regards

Jochen Merz Software

Im stillen Winkel 12 - D-47169

Duisburg - Germany

email: JochenMerz@j-m-s.com

Hi Abed,

I (along with Paul Hodgson, Keith Watson, possibly others) have recently been approached by the authors of Warajevo to help them with technical info and test software for their proposed TS2068 emulation, which they hope to include in their v2.5 release slated for June/July.

Most of the technical questions have been answered except:

1. How many horizontal scan lines in the top and bottom borders?
2. How many T states in the left and right borders?

They are also looking for software they can test on their emulator, especially stuff that uses the 2068's unique features. They are aware that some software is still being sold here and as a result have promised not to release any of it to the Internet as a whole - they will just use it for testing their emulation.

I and a few others have already sent them a number of things: Hot Z on cart, Spectrum emulator on cart, MSCRIPT, Techdraw JR, upload2000, zeal disassembler, 3d deathchase, cyber zone, 02/88 issue Byte Power, basic 64, OS 64 on cart. They already have the handful of games & utils available on the Internet that have been converted to run on the 2068 (and use its ay chip and joysticks).

My own 2068-specific software collection is a little sparse. Do you know of anyone who might be able to help? Keep in mind that the first release will not include Larken or JLO emulation. Thanks again Abed.

One of your loyal ZQA readers,

Alvin



aralbrec@concentric.net

*I will try to answer your questions.*

1. The 2068 Mode 1 has 192x256 lines, 192x512 in Mode 2 - NTSC compatible. I would believe that the over scan lines are the same as in NTSC.

2. I do not understand what is meant by the \*\* T \*\* state. Again, the 2068 is fully compatible with the NTSC whether you use its VIDEO or its RGB outputs. There are 4 Display Modes, but Display Mode 1 is generally used for most programs.

Good luck and let me know if I can be of further help.

Abed

*I forgot to mentioned that unlike PCs, the TS2068 display memory is bit-mapped.*

Hello Alvin,

*It seems that I fell in the same trap — We are dealing with **software** and not **hardware**. It should work just fine.*

Abed

They are quite concerned about the details as they would like to release an emulator that's as close to the original as possible.

I'll try to expand on what they are looking for:

NTSC has 262 lines on the screen. The 2068 divides a 14.112MHz clock by 896 to generate the horizontal sweep freq. (15.75kHz), which means the 2068 has a frame rate of  $15.75 \times 262 = 60.145\text{Hz}$  (this is also used to generate an interrupt).

In normal 256x192 mode, within the horizontal scan line, pixels are shifted out serially at a rate of  $14.112\text{MHz}/2 = 7.056\text{MHz}$ . With a 256 pixel horizontal resolution, each 256 pixel line is written out in  $1/7.056 \times 256 = 36.28\mu\text{s}$ , not including the border.

The ts2068's clock is derived from the 14.112MHz clock by dividing by 4. This means that each horizontal scan line takes  $896/4 = 224$  T states to draw, where 1T state = time for one z80 clock cycle.

Now, the 2068 screen has 192 lines, but NTSC has 262 lines total. That leaves 70 lines in the top and bottom borders. The authors want to know how many lines are in the top border.

Each horizontal line has 256 pixels and a left & right border. They know the whole thing takes 224T states to draw, but they would like to know how wide the left border is, preferably in T states (the time delay before the 256 pixel line is drawn).

The top and bottom borders and the left and right borders are probably equal in size, in which case it's easy to answer their questions. But guessing isn't good enough.

The main concern for them is that it is possible to mix display modes on the 2068 so that parts of the screen are in 512x192 mode, other parts in 256x192 and still others in 256x192 hi colour. Unless they get these numbers right, their emulated display could be a mess compared to the real thing.

I'm not too familiar with video of any standard so any corrections to the above is much appreciated.

I have also given them a brief description of the Larken RAMdisk. I don't own one of these, so it's a lot of guesswork on my part. Could you let me know if I have it right? Basically I told them that Larken DOS maps 32k

blocks into the top 32k of the DOCK bank. To change which 32k block of the 256k available is mapped, you have to do an i/o write to Larken's RAMdisk hardware.

Thanks Abed,

Alvin

PS. It looks like the emulation is working well - they tested all the TS2068 snaps I sent and they all seem to work.

Hi Abed,

First, thanks for the Humor! Some of that was GREAT!

Now the bad news .... I also sent a SASEs to TEJ Computer Products and John McMichael.

TEJ's came back today marked "Attempted Not Known". I tried the number listed for them in ZQA tonight and got no answer. I will try again tomorrow during business hours. I'll let you know what I find out.

John McMichael sent a reply that said "Unfortunately, I don't have a whole lot of that kind of stuff left ... Several years ago I made the decision to switch to IBM computers and sold quite a bit of my Timex computer stuff".

Looks like our resources are dwindling fast! I also sent SASEs to Jack Dohany, Bill Russell and Keith Watson. Bill Russell responded and said he had a few items still available. So far no response from the others.

If you can find out the names of the owners for TEJ and Sunset Electronics, I will try to track them down.

Jack

Abed,

Dave Bennett gave me web address for emulators for Mac so I downloaded 3 Spectrum-to-Mac emulators—guess will not need ad in newsletter. Thanks tho.

The best place I have found for Macintosh emulation software is at the following web site

<http://www.emulation.net/index.html>.

Thanks to Dave Bennett

Harriet (Joan) Kealy

To : CATS , LIST and ZXir QLive Alive

I writing to say that I have recently added to my homepage a high resolution schematic of the Sinclair +2a/+3 ZX Spectrum. The schematic is divided in two halves and each half is 4068 by 5808. I've retyped all the hard to read text, filled in missing tracks and cleaned up the circuit connections, it took me about two months to do it all.

The scan is in monochrome and in the TIFF format.

Amstrad (the company that bought out Sinclair) position on the schematic and technical manual is that it can be distributed, just as the ROM's are , free for use, but Amstrad keeps all rights. Enjoy the schematic and the technical manual. My homepage is:

<http://www.atlantic.net/adansby/sinclair.html>

l8r andy (dansby)

[adansby@atlantic.net](mailto:adansby@atlantic.net)

Hi Abed,

I got your reply email but inadvertently deleted it. I was smart enough to print it out, though.

I may try to find the TEJ and Sunset owners anyway. Even if they have very little it might be good to grab it, if possible, for the future. Hopefully, whatever they had hasn't ended up in a dumpster. I did call TEJ again today, but got

no answer at the listed number.

Bill Russell said there had been a few inquiries and that he should go through his boxes to see exactly what he had. So far he hasn't gotten back to me (we corresponded the end of February).

Say, when would you like the list of the item I have? I know the next ZQA issue is in June and am wondering how soon before the issue you would like it. Timing is everything, you know. Any special format? I can do it in ASCII & Word 6.0 for sure, maybe a couple of others. Do you want a disk or can I just attach it to an email?

Jack

Hi,

I am interested in finding out more information about this group. I have a MK 14, two ZX80 machines, numerous ZX81 and T/S1000 machines, a couple T/S1500 machines, several printers and at least one T/S2068.

John M. Franke WA4WDL

23 Parkwood Dr. Apt 201

Yorktown, VA 23693-4819

E-mail: [j.m.franke@larc.nasa.gov](mailto:j.m.franke@larc.nasa.gov)

Hello Abed,

April 9, 1998

Just received this disk in today's mail and I tried to load the file to read it. One computer could not even read the directory. The other one could read the directory but the file has an error in it. (*Apparently the disk was x-rayed*)

I am also enclosing a copy of the statement from UPS for the last shipment of boxes that went to Iowa. I hope to have another, maybe the last, shipment out in a week or two.

By the way, there was a Larken disk I/F and cartridge board here after all so it will go out in the next shipment to Iowa.

There is a balance of \$109.46 left of the shipping money from TSNUG. I will ship boxes until that runs out or until I run out of boxes. If there is any part of the above amount left I will return it to you.

Whatever is left after I have shipped as many boxes to Iowa that the money will cover will be given to Jack Boatwright in Bend. He will eventually get an inventory completed and will send you a copy of such inventory list to be printed in the newsletter. I am just happy that the TS items are not being used as landfill. I cannot believe how much room I have now that this stuff is being cleared out!

I will look forward to reading what I assume was the IN/OUT column from the current issue of the newsletter if you send another copy. Take Care,

Rod Gowen

Thanks Abed

.....I sent you a reply email a week or so ago that came back today. It was the one where you didn't understand what I meant by the term "carts". I had shortened cartridges to carts. I have gotten a couple of inquiries on obtaining 2068 cartridges. I suppose these are history by now, unless there are some in Rod's stuff.

Jack

Please send me info on your Timex Sinclair Club and newsletter. Thanks

Terry Jones

[tnjones@iname.com](mailto:tnjones@iname.com)

[arizona@access.mountain.net](mailto:arizona@access.mountain.net)

From: Swoger-CENG108 Bob on Thu, Apr 16, 1998 10:13

AM Subject: RE: RMG

I said he received stuff from ROD we asked not to be shipped. I said for the most part Rod did ship what was stated would be shipped, right J?

-----GATOR-----

Hi Abed,

I will pick up the final items from Rod on Saturday the 25th. That gives me about 20 days to finalize the list for you.

Jack

## Vacuum Tubes

One of the 'mysteries of the universe' that I do NOT understand is how a vacuum tube functions ... if you can explain THAT, a lot of gaps in my understanding of electronics will probably be filled in.

Al. Feng

*I will try to put it in plain English.*

The biggest vacuum tube you have in your house is the TV picture tube.

It is funnel shaped, you must have seen one of course. It is highly evacuated to create a vacuum to facilitate electron motion inside.

At the narrow end inside, there is a metal plate. Behind this plate there is an electric heater that heats this plate to a very high temperature thus liberating electrons.

The negatively charged (-) heated plate liberates electrons, these electrons are magnetically *bundled* into a very narrow ray (beam). The electron beam is attracted to the front of the picture tube (the large end) that is positively (+) charged to about 40,000 volts and coated with phosphors on the inside that glow when this beam hits that surface producing a piece of the picture.

Positive and negative charges do attract each other like the north and south magnet poles.

>...what function does a vacuum tube serve in a circuit ... how does it modify what is happening?

The electron tube is used to amplify an alternating current signal.

It can also rectify an alternating current into direct current.

It can also modify impedance.

It can work as a switch.

It can oscillate. (generate a signal) etc.....

In this day of solid state there are still electron tubes used where solid state can not handle the power such as magnetrons for RADAR and for your microwave oven.

I will describe amplification.

An electron tube contains an electron source, the heated metal plate called CATHODE. This cathode emits electrons that travel to another metal plate called the PLATE which is charged (+). Between the two there is an element called GRID. An alternating signal is applied to the grid. As this signal alternates, the electron flow from the cathode to the plate increases or decreases accordingly. The resulting signal shows up at the plate many times the original



magnitude of the signal on the grid - amplified.

>...in the case of a first generation computer, how did the vacuum tubes function in the circuit?

The tubes functioned as an ON and OFF switch devices for the binary 0 and 1.

>Why are more tubes (or, transistors) BETTER?

They are not better but rather more suited for a particular application. Abed

## Videogame Collector!

I'm looking for cartridges for the TS 2068 (and perhaps the TS 1000, as well as the cartridge module for it), and was wondering if

a) the RMG inventory has any and if it's available yet,

b) I could put a want ad up even though I'm not a member or

c) You know anyone selling the cartridges.

Russ Perry Jr

2175 S. Tonne Dr #105

Arlington Hts, IL 60005

847-952-9729

slapdash@enteract.com

I saw each of your msgs that you sent yesterday. Yes, Bob, except for more copies of T/S tape software, like 15 copies of States & Capitals, then we'll probably ever need what we've recvd so far is what we want. I agree, Abed, now - at the end of this road - is not the time to get trivial about what has been sent, since it is almost exactly what we want, we should be so lucky with our children. Jack, I see no reason to return the distance you have to drive for the A & J 2000, unless you're going that way anyway or you sense Rod wants to do it. If you keep it, it would be just more money that we could save.

Right? All? So, even though I have printed the complete list of RMG stuff you provided, Bob, etc. it will sit until after. As will the shipments, with the first in house basement office/orphan computer room (when I foolishly thought that was all that was coming) and the second in our heated garage. A rough list of the second is: 11 QL's (10 is their orig. boxes status unknown and the 11th modified into a

Commodore/Vic 20 keyboard case w/modified keyboard), 3 cases of 48 each 2040 thermal paper in new condition, and a box of mostly T/S tape SW incl 'Rocky Horror Show', 'American Football' - Speecy, 'Gulpman', Greeting Card Designer', Stan Lemke stuff, 'Night Gunner' and a bunch of copies of stuff like 'Profile 3', etc. More later J

Hiroshima '45 - T/S '83 - Chernobyl '86 - Windows '95

John J. (Jay) Shepard, III wrote: >

> So lucky with our children. Jack, I see no reason to return the distance you have to drive for the A & J 2000, unless you're going that way anyway or you sense Rod wants to do it. If you keep it, it would be just more money that we could save. Right? All?

I am going over to Rod's on the 25th to pick up the

rest of the items that won't be shipped. I don't need another A&J (I have 2 interfaces and 3 drives already)! Not a problem to keep it here, though. You're right, it would save on shipping, and, I can send it from here if someone wants it.

Should I let Rod know, or will one of you?

*Don't bother to tell Rod. Keep it and show it on your list.*

Hi Abed,

Just letting you know that I picked up the last of the items from Rod on Saturday. He still had one box or so to send to Iowa. The A&J 2000 will go to Iowa. Rod insisted that it should, so I took it with me on Saturday.

Abed, I will have a list to you soon of the stuff still in Oregon.

Also, Rod was going to save me an Aerco disk interface but sent it to Iowa. Jay, would you be kind enough to save one for me. Or should I go through Frank Davis?

Bob, Rod gave me the LogiCall disk and docs. He said you made him promise!!! Thanks.

Rod has sent one fellow to me who has a corrupted Larken file called "bedet" or "bedit". Trouble is I still haven't gotten my Larken back from Dan, so can't help him yet.

Anyway, that's what's new in this neck of the woods.

Jack

Message text written by INTERNET:net@concentric.net

You would not believe the can of worms--ran all over Germany (it felt like cuz of expense) trying to get "ZX Loader" to load "Bridge" into MacSpectacle (best emulator) from my old Tandy Computer Cassette recorder. After being reminded mercilessly how bad my German is, I finally found the ZX Loader on US website. Download no problem and fine piece of programming!

But like Guenter Woigk, author of ZX Loader and McSpectacle, said loading from these 12 year old tapes is not easy and the Tandy recorder does not adjust anything but volume. I have tried 3 or 4 times yet and cannot get a useable tape. So far all it has cost me is way more than the original tape. Thank

God both TS2068s still work. Adventure fun anyhow and I shall try again on tape. This afternoon go to register for new economy line to Internet. <

Harriet J. Kealy

Hi Abed,

>The literature I have shows that Timex announced 10 2068 cartridges. Do you know if they were all produced?

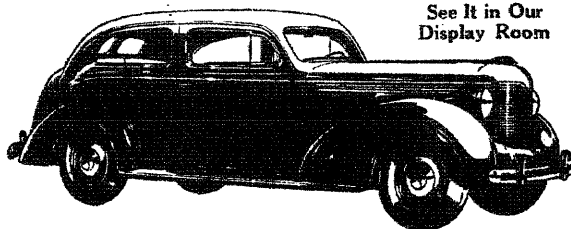
> Were there anymore produced by anyone else?

*There were a few made by others - like the OS64, Larken .. can't think of all of them at this time. They are hard to find now. But I maybe all wet.*

>Well, I have Budgeter, Crazybugs, States & Capitals, and Flight Simulator cartridges. They say Timex Sinclair on them. Rod says that there should also be Penetrator, Casino

## 1938 De Soto

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2-Door Touring Brougham \$1095.00 F.O.B. Bisbee

## Cochise Motor Co.

1, Androids, and Pinball carts.

Jack

Seems to me if it were on your inventory list that would do the trick.

I saw Frank Davis today. He is now aware that all is almost in place. He did not do very much business at our show, but we hope that he and Carol had a good visit and nice stay at the INN. I feel that he may have only broke even on this fest. Donaldson, Herre, Kwitkowski, Pashtoon and I all attended.

-----GATOR-----

Hi Abed,

I'm attaching a list of the items I picked up from Rod. It's pretty close to being complete, but you'll notice I have got the disk drives listed yet, and a couple of other things. I will keep working on it when I have time, but probably won't be done by the 15th and wanted to send you something for ZQA! Take care,

Jack

TERMAX is merely the localized version of MaxCom. The 2068 simply has not enough memory for all the neat capabilities, we have given MaxCom!

Hey, Abed, this is GREAT! So, why don't you consider it for inclusion in ZQA? David

### Error Messages

The following are new Windows messages that are under consideration for the planned Windows 2000:

- 1) Smash forehead on keyboard to continue.
- 2) Enter any 11-digit prime number to continue.
- 3) Press any key to continue or any other key to quit.
- 4) Press any key except... no, No, NO, NOT THAT ONE!
- 5) Press Ctrl-Alt-Del now for IQ test.
- 6) Close your eyes and press escape three times.
- 7) Bad command or file name! Go stand in the corner.
- 8) This will end your Windows session. Do you want to play another game?
- 9) Windows message: "Error saving file! Format drive now? (Y/Y)"
- 10) This is a message from God Gates: "Rebooting the world. Please log off."
- 11) To "shut down" your system, type "WIN."
- 12) BREAKFAST.SYS halted... Cereal port not responding.
- 13) COFFEE.SYS missing... Insert cup in cup holder and press any key.
- 14) CONGRESS.SYS corrupted... Re-boot Washington D.C.? (Y/N)
- 15) File not found. Should I fake it? (Y/N)
- 16) Bad or missing mouse. Spank the cat? (Y/N)
- 17) Runtime Error 6D at 417A:32CF: Incompetent User.
- 18) Error reading FAT record: Try the SKINNY one? (Y/N)
- 19) WinErr 16547: LPT1 not found. Use backup. (PENCIL & PAPER.SYS)
- 20) User Error: Replace user.
- 21) Windows VirusScan 1.0 - "Windows found: Remove it? (Y/N)"
- 22) Welcome to Microsoft's World - Your Mortgage is Past Due...
- 23) If you are an artist, you should know that Bill Gates

owns you and all your future creations. Doesn't it feel nice to have security?

- 24) Required Government Warning: After we got caught in cahoots with the hardware manufacturers for trying to needlessly fill your hard drives, the following message is now required as you save your files in Word.

"Word has detected that you don't wish to save your text file as a lumpy and space wasting .doc format filled with potential viruses. Would you like to save your old outdated ASCII file as a Word file anyway?"

- 25) Your hard drive has been scanned and all stolen software titles have been deleted. The police are on the way.

To: Swoger-CENG108 Bob

From: alfeng@juno.com@INTERNET on Fri, Jan 30, 1998  
Hi Bob,

Well, Bob ... I don't know who this Bill McKelvey is, but I will say that he must be a glutton for punishment. But, I will say that I did produce the BEST monthly newsletter that the volunteers at the Mission ever saw using just a copy of WordPerfect and a copier machine that had zoom & reduction capability ... I used cut-and-paste to insert graphics, including the banner.

There is no reason that he needs more than what he has ... McKelvey's only limitation is his design sensibilities and his patience with the speed (or, lack of) of the QL. E-Mail with the QL. This is only theoretical, but if McKelvey has an ISP, there is every probability that QMOSAIC will suffice for sending and receiving e-mail ... he should contact local ISPs and AOL (as an example) to see they can advise him about connecting non-PC & non-MAC platforms.

If he has the patience, he can modify the LISTing of QLUTter that was recently printed in ZQA! to send and receive.

If someone tells me what needs to be done, I might be able to write the PROCEDURE for the program.

I also think you may want to re-send the message to someone at NESQLUG.

AL

> From: BILL MCKELVEY Sent: 09-24-97 13:29

To: BOB SWOGER

Re: (R)DeskTop Publishing

>> My question is: do you want to do the desktop publishing on the QL or the TS2068?

I want to be able to do the DTP on my new QL. I was using WordMaster (from Jack Dohaney) on my company news letter. I would like to be able to use something similar on my QL. I heard something like Designline? can do that?

I have Page Designer 3 (similar to PixelPrintpro) and Text87.

How do I get in touch with Paul Holmgren?

>> By the way, do you have an Internet EMAIL address?

I do not have an e-mail address as I only have Sinclair computers, and do not know any way to send or receive e-mail with them.

David:

I have two copies of the ZEUS documentation. It is a 22-page manual. The pages are about 5 x 7 inches, so the documentation is a bit skimpy. But it is all there, nevertheless. ZEUS is a Z-80 assembler, sold by SoftSync,

Inc., and this copy says that it is for the Timex/Sinclair 2068. It's one of those things I could not bear to throw out. Interested in HOTZ, by chance!!

Let me know if you want me to send you a copy of Zeus documentation. Tape also if you want.

George Chambers

Dear George :

I have found a copy of ZTERM-64 XMODEM Fix by Rdwin L. Schoen, and it is straightforward. Bob Schimke assures me, that this fix will also repair MaxCom's problem.

So, we'll let you all know how it goes, but we can nevertheless use any instructions you know of on using ZEUS Assembler.

Yes, George, I have ZEUS on **both** tape and disk. HOTZ, too! It's just that I forget how to use ZEUS, and I thought maybe instructions would at least HELP !!

Notice, that MaxCom is receiving CODED files from the Apple, here. So, the SEND routine needs a little work.

David Lassov

Hello Abed,

Thanks for sending the disk back again. I just finished "reading" the file and thought that I should set the record straight.

Somehow, someone has the impression that I was or wanted to "move" from my present location. Not so! I moved here in 1993 and when my wife died. I used her life insurance to pay off the house so I am not about to move. The reason for wanting to be rid of the TS inventory is multi-faceted:

1. I can no longer run a mail order business effectively with my rapidly failing vision and no one to help.
2. The TS inventory is not a hot property at this stage and I knew that it could only get worse.
3. I needed the space for other purposes. My oldest daughter is living here and the inventory was being stored in what I want to use for my new office/library. Then my current office will become her room.
4. My new business "old time radio" programming for a local radio station, has forced me to find a place to store several thousand old radio shows on cassette, reel-to-reel tapes as well as video tape. This, along with my office will be located in the former storage room that has now been cleared of TS inventory.

I have, at this time, very little TS inventory left at this location. I have made 3 shipments to Mr. Shepard in Iowa, totaling 364 pounds. I have had Jack Boatwright pick up one van load of items, probably more than 900 pounds in all. He is due to pick up a second load (maybe another 200 pounds in all) this weekend. I also sent one shipment of 65 pounds to Mr. Gillespie.

I was amazed to find out when I started the shipping that UPS had just raised all of their rates and no longer charged a "pick up" fee. I did a little figuring and came to the conclusion that the current rates are about \$0.92 per pound to Iowa.

At this point, I have a few more items to ship to Iowa and have \$60.19 left of the moneys sent to me by Abed. I will ship the remaining items and then will hold the balance until June, by which time I will have moved my office and will be absolutely sure that I do not have anything left of

interest to ship. On June 15, 1998, I will send a refund check to you for T/SNUG

I want to thank all of those who made it possible for these items to find a place where they can be dispersed to those who may have a use for them. I sure did not relish the thought that they would wind up in the dump.

I will be giving Jack Boatwright a LOT of printed materials. He will have many schematics, manuals, user guides, magazines, books, and other documents that I have no further use for. He will get a lot of ad copy from virtually all of the early vendors involved in the TS line. He says that he hopes to make all of this material available to any who want it. He even hopes to post a lot of it on the Internet at some future date. I wish him luck.

Remember, I will still make myself available as a TS resource if I am needed.

**Thanks again Abed and Bob as well as all who contributed to the 'RMG' project.**

Sincerely,

Rod Gowen

On Wed, May 13, 1998, fdavis@iquest.net wrote:

This will be the final repeat to those who do not feel it is too far to go to attend a very unique show for QL/QDOS/SMSQE users. May 23rd of 1998, please try to be there. Bedford PA USA at the Carriage House restaurant.

Frank Davis

FWD Computing

fdavis@iquest.net

Show Co-ordinator

Abed,

I'm working on another issue, but I don't have enough material. I am working on a Qliberator Source Book. It will cover tips and tricks on using Qlib and the various extensions and SB tools to help the programmer. I'm also working on a "QL PD Documentation Project". The idea is to get as much QL/QDOS tech. Information available to all. From various sources I already have:

QDOS Traps

System Vars

Norman Dunbar's EasyPTR tutorial

PE Tutorial

Qlib Source Book (when done)

I've included some of my articles for various newsletters. I'm looking for authors to submit any articles they have written for any QL newsletter. Looking to focus on more tutorial type articles. I plan to make as much of this available on my web page. That's all for now.

Tim Swenson

Dear George:

We are working on Maxbbs.C1, in order to update MaxCom. Maxbbs.C1 is David Solly's version of the CODE for MaxCom, which accepts ^C as a terminal command, rather than &. Also, Les Cottrell sent us a nice disassembly of MOCOD.C1. We have filled in some and corrected some, in order to update Les's listing, by comparing it to what SPECTRAMON tells us. Of course, SPECTRAMON is only one of your contributions to this effort !!

Now, early on, we have identified some CODE from 60352 to 60393. It is called at 60320, from within some INs and OUTs. The CODE after 60362 seems to put OUT a

RUN, COPY, and a COPY. Then it returns, and it looks like we can patch this up, by some CODE at the end of RAM, before 65535. KEEP ON TIMEX'n

David Lassov

Anyone in your group have a TS2048 or TS2068 for sale?

William Girnius

Network Operations Manager, Kansas City LAN Support

US Dept. of Labor, BLS

1100 Main St. Suite 600

Kansas City, MO 64105

816-426-7095 816-426-6778 (Fax)

## Sinclair E-Mail List

Albrecht, Alvin	aralbrec@concentric.net
Anson, Gerald	jerrya@aztec.asu.edu
Barker Robin	Robin@di-ren.demon.co.uk
Bennett, Dave	dbennett@epix.net
Boatwright, Jack	jboatno4@outlawnet.com
Boehm, Al	boehm@ziplink.net
Boehm, Bill	boehm@plh.af.mil
C. A. T. S.	mf0002@epfl2.epflbalto.org
Cable, Bill	bcable@triton.coat.com
Chambers, George	gfchamb@pathcom.com
Collins, Bill	bcollins@home.ifx.net
Cottrell, Les	jacottrell@juno.com
Cruz-Figueroa, Jaime	cruzfiguer@aol.com
Dansby, Andrew	adansby@atlantic.net
Davis, Frank	fdavis@iquest.net
Decourtney, Jeff	104727.1110@compuserve.com
England, William	wengland@iname.com
Feng, Al	alfeng@juno.com
Fink, Mike	domino.cubes@excelsior.net
Franke, John	j.m.franke@larc.nasa.gov
Ganger, Gary	gangerg@dma.org
Gillespie, Doug	aa431@cleveland.freenet.edu
Harbit, Ken	krh03@csufresno.edu
Henderlight, Mike	mikehend@microsoft.com
Henn, Fred	oranur@juno.com
Hunkins, James	jdhunki@ibm.net
Impellizzeri, John	jimpellizzeri@compuserve.com
Jaap, Matthias	Matthias_Jaap@hhs.hh.schule.de
Jonas, Mike	mjonas@bbs.com
Jones, Terry	tjones@iname.com
Kaczor, Jon	75363.1127@compuserve.com
Kahale, Abed	akahale@compuserve.com
Kealy, Harriet Joan	hjkealy@hilconet.com
Kingsley, Ed	elk4@aol.com
König, Urs	urs.koenig@agrodata.ch
KurtK7	kurtk7@aol.com
Kwitkowski, Phillip	kwit47@aol.com
Lancaster, Garry	dharkhig@delphi.com
Lassov, David	emanon@azstarnet.com
Lebowitz, Dave	dki@dpliv.com
Lessenberry, Gary	glessenb@usr.com
Liebert-Adelt, Peter	p.liebert@t-online.de
Malloy, Bob	74776.1161@compuserve.com
McKelvey, William	mckelveyw@delphi.com

Merz, Jochen	jochenmerz@j-m-s.com
Miller, Seymour	seymil@delphi.com
Muth, Bob	bobkeeper1@aol.com
Norton, Gary	gnorton@world.std.com
Parrish, Gil	107765.1161@compuserve.com
Pashtoon, Nazir	napware@juno.com
Pazmino, John	john.pazmino@moondog.com
Perry, Russ Jr	slapdash@enteract.com
Rigter, Wilf	rigter@cafe.net
Rish John	74601.1535@compuserve.com
Shepard, Jay	jshepard@netins.net
Simon, Thomas	73177.333@compuserve.com
Skapinski, Tom	tskapins@juno.com
Smith, Dennis	denny.smith@juno.com
Swenson, Tim	swensont@jack.sns.com
Swenson, Tim	swensont@sirclive.csd.sgi.com
Swentko, Wally	wswentko@maroon.tc.umn.edu
Swoger, Robert	ceng108@email.mot.com
Taylor, Jeff	jetaylor@spar.ca
Thoresen, Jeff	74200.257@compuserve.com
Walterman, Don	walterm@ix.netcom.com
Washington, Barry	mf0002@epfl2.epflbalto.org

Abed,

I just heard from Jan Venema, and he has indicated that you can exit the DOS version of QLAY by using a 'CTRL ALT SHIFT X' (i.e., upper case X) ... it works.

Venema also indicated that

\* via option -m you can emulate anything from 128k till 8Meg

\* mdv does not solve the directory issue. Without some transfer program from QL to PC it's of little use. For the moment just rely on WIN1\_

\* SERIAL is more likely but equally difficult to me to code. It will take a while to do that addition. No plans yet for direct FLP access

\* The plan is that QLAY will remain freeware. As the 'readme.txt' says, from release 090 on, all source code will be available too... Al Feng

Hi Abed,

Here is what I have so far in the way of a **Timex Web Page**.

I still need to link to other pages so "what you see is what you get", for now.

Constructive criticism is always welcome.

Jack Welcome to TIMEXSinclair World

Serving all Timex/Sinclair computers- TS1000, TS1500 & TS2068 (and maybe even the Sinclairs)  
Member T/SNUG

T/SNUG Questions and Inquiries contact: Abed Kahale (akahale@compuserve.com)

The machines 1. TS1000 Computer 2. TS1500 Computer 3. TS2068 Computer

The Peripherals •TS1016 16K RAM •TS1510 Command Cartridge Player •TS2020 Computer Program Recorder •TS2040 Printer •TS2050 Telephone Modem •TS2090 Command Sticks

The Software •TS1000/1500 •TS2068

Tell us what you think of this site.

Jack Boatwright, May 28, 1998 jboatno4@outlawnet.com



# FROM THE CHAIRMAN'S DISK

Donald S. Lambert

**W**hen I had my annual physical in December Dr. Paine suggested get my appendix scar operated on since it was herniating. So that was a medical problem to get taken care of before it fully herniated and entrapped the bowels. I put that on hold for a while. Then when I went in for an eye exam February 25th which I felt was needed to get new lenses I was told that both eyes were in need of cataract surgery. The left eye for the first time and the right eye that had been operated on in 1994 a laser burn off of the membrane back of the implanted lens and that would fix that eye for the future since it would never get cloudy again.

**S**o I ended up with an eye appointment with Dr. Parent who is the eye surgeon that I had went to before. And the appointment was for April 8th to exam the left eye for first time surgery and for the right eye to be treated (blasting the membrane off in tiny blasts). March 8th I went to Indianapolis to the HamFest and talked to Frank Davis about his experiences with his herniated appendix scar. No way I wanted to go through that. I decided that the worst of the winter was over. I saw the Surgeons Dr. Paul, and on March 16th I was operated on and spent two days in the hospital and then loafed around home (no driving the cars no lifting of more than 5 lbs.) until April 30th when I was told I could do anything I wanted to. On April 8th Masako, my wife, drive me to Dr. Parent's clinic and we spent most of an afternoon there and I got the laser treatment. That evening at 10 the effects of all the eye drops used (2illions of them as the kids would say) wore off and my vision return to the right eye. How did I know that it had worked? I could read the fine print in my paperback dictionary without a magnifying glass! What is next? June 11th when I go back to Dr. Parent's clinic to get my left eye worked on.

**I** will admit that I did not get much computing done during my recovery. For the first part I did a lot of napping. Seems like I was worn out from just getting up and eating breakfast and shaving and washing up. And then later it seem like all I wanted to do with the computer required lifting in excess of five pounds. And the weather was so gloomy that I didn't have much ambition. And my five foots ninety five pound wife had to mow the yard three time5 before I was able to take over. I am sure glad I bought a self propelled lawn mower last fall.

**T**he hardest thing to do is to ride with the wife driving and not back-seat drive. Her driving habits are not mine. But we got there and no accidents 50 I guess all is O.K.

**W**ay back when! last year sometimes I saw an article in NUTS & VOLTS about making a BATTERY Gas GAUGE. Well, a later update gave a company that offered a printed circuit board for that and my letter to them was printed in the current (May 1998) issue to modify the 12 volt monitoring to a 6 volt (or the math to figure for any volt) battery. I had ordered a pair of boards when I saw that they were available and I ordered the LM3914 chip which came last week. So now as the garage gets warmer

have to get that going for using S RAYOVAC RENEWABLE Alkaline batteries to be standby for the Z88.

**I** also ordered a 110 VAC to 220 VAC wallwart to use on the Z88 EPROM ERASER. I needed to have enough items to make the order over \$20.00 to avoid the extra \$5.00 charge for a small order. I ordered from JAMECO. For those interested the transformer is #99457 50vN 110V4C to 220VAC weight 0.7 pounds \*5.95. JAMECO 1-800-831-4242 and ask for a catalog.

**A**fter all the excitement and planning I believe that RMG has all the T/S stuff moved to where it can be accessed and shipped to any that want it. But like I always have maintained there are so many that are using the Timex Sinclair computers that don't know of all the sources there are. If we had known of Jack Boatwright before this all would have been taken care of much easier and cheaper. But at least it got down.

**I** did get the lists of the CATS cassette library made from the information in the newsletters. I have found that some of the programs would not LOAD and SAVE BUT! in some cases learned that some of the programs were Spectrum programs. find one program will not LIST even if you can get it to break. But on that I did get further information so I will have to get back to that. Ns John Riley wrote, he learned a lot from converting cassette ACW DCISY- but | mi sd sinCQ the pure AERCO does not have a NMI SAVE button.

**I** was SAVEing to Oliger SAFE and one thing it has in the directory is the byte length of the program SAVED. So that is handy when you see from the header reader that the program is, for instance, 4751 bytes long and the Cat after SAVEing to disk shows 1395 you know that the entire program did not get SAVED. I also learned that using MERGE "" to LOAD a program often would break a program that I could not BREAK any other way. Of course that is old hat to a lot of you.

**I** use MSCRIPT for my word processor and I wanted to number the pages. So read the MSCRIPT manual and it gives it as >PN=xx where the xx is the 5taring number of the page. But it didn't work however I saw an example in the manual:

>LM=B, LL=50, PS=4, PL=43, PN=1

>BT=article name//Page \$

**T**hat did work. For those of you that don't use MSCRIPT this is the header and none of this appears in the text and deciphered it is Left Margin 8, Line Length 50, Page Space 4, Page length 43, Page number 1. Bottom of text article names and the slashes the article name and the article name would be centered and both slashes before the article name would print the article name on the far right. Now the Page \$ is the one that gets the page number to print. I suppose the \$ is for the string of the page number. If you had wanted the article name at the top along with the page number you would have used TT instead of BT. TT is Top of Text in my mind.

Of course it takes a little waste paper to learn the proper PS which is the number of lines between paper. Thought I had it set and it ran off several pages and suddenly it started to put text on the following page and then the article name and Page number. What had happened was that the preceding pages had a blank line at the bottom of each page so when the line on the bottom line had text was the PS forced to the next page. I cured that by decreasing the PL by one. How many years have I

been using MSCRIPT and didn't know how to use Page numbering? Must be about 13 or 14.

Now that I am capable of doing thin<sup>95</sup> I have been informed that get done. So that is what will be what I will be doing the next few weeks. With TSing being what I get to do between times if there is any energy left for that. I do find that I tire more easily 50 maybe I am not 100% over the operation. Till next time this is it.

## Timex-Sinclair Inventory

### Available To You for **Free** (You pay shipping expenses)

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# QLAY 0.85 -- First Look & More

*by Al Feng*

Jan Venema (<http://www.inter.nl.net/hcc/A.Jaw.Venema>) recently made a new version of QLAY available (03 May 1998).

QLAY is a Freeware, QL emulator, and with the help of others, I received a copy of the most recently posted ZIP files -- first, version 0.84, and subsequently, QLAY 0.85. For all practical purposes, QLAY requires a 486-or-better running at 66 MHz or faster with 8 Meg of memory. The emulation creates a 640K QL.

The most recent release of QLAY actually comes in two versions -- the traditional DOS program and one that can be launched directly from within Windows 95. That's the good news. The better news is that Jan Venema has indicated that he is already working on the next version and it should be ready by the time you read this.

## **QLAY 0.85a**

The DOS based code functions in a manner similar to the previous versions.

First you load the CWSDPMI.EXE file, and then the QL code and extensions are loaded, and then the NFA (Native File Access) code is loaded. The NFA code give QLAY the ability to access the host PC's hardware and is a remarkable piece of coding.

Depending on the speed of your computer, the code is processed, and then the emulation begins.

The obvious change is the inclusion of the QLAY.RC file. This file is an ASCII script which is essentially a dedicated BATch file which both version 0.85a & 0.85b look for when the EXEcutable file is loaded. This is how the (stock) QLAY.RC file looks:

```
-r js.rom
-c c000@nfa.rom
-f 1000
```

The syntax appears to be just different enough that I was not able to successfully load the TK2\_EXTensions on the first several tries.

I finally e-mailed Jan Venema to get the "proper" syntax:

```
-r js.rom
-c 0c000@f:\tk2.ext
-c c0000@f:\nfa.rom
-d 2
```

The new version comes with an image of the Dynamic RAM code, but, I have not been able to load it to date. This code (or, similar) is necessary if you want to use the XCHANGE program which sets up temporary files in RAM1. All other tested programs ran, including the TURBO compiler.

Exit the emulation via CTRL\_ALT\_DEL key combination when loaded from within Win95.

To exit from a plain DOS load, I believe you have to reset the computer.

## **QLAY 0.85b**

For reasons that are always suspect, I upgraded my IBM compatible PC recently and the OS with a copy of Win95. While subjecting myself to the OS upgrade was semi-traumatic (i.e., I inadvertently wiped out all my files!), having Win95 allows me to give the new QLAYW.EXE (a.k.a. QLAY 0.85b) a try.

QLAYW.EXE is designed to run directly from either a Win95 icon or from the Win95 DOS prompt.

When you load QLAYW.EXE, you will see a modest window with the following options: File, Screen, Language, Help.

Using the 'File' selection, you essentially verify (or, load?) the equivalent of the CWSDPMI.EXE code by selecting 'Init!'. You then select 'Go!'. Very shortly after that, you will see the familiar speckled Screen followed by the QL's startup screen.

I was not able to load an image of my Minerva ROM code. I was told that this is only viable with the JSL1 (i.e., older) code (which I have). I have to presume that my Minerva code file was corrupted in the transfer.

Your language choice is English or German, with the default now being English.

I believe that all my problems can be related to implementation of the QLAY.RC file.

If your QL program uses ALT keys, then you will want to use the DOS version due to a key-stroke conflict which will exist with Win95.

### **Hey, I knew it could be done!**

Many of you may recall that one of my biggest complaints about SMSQ [the OS used for the QXL & QPC emulators] is that it the display that is generated is less than I think it could be.

Jan Venema modestly states that "the Windows95 version has better display support." With the Win95 version of QLAY, Jan Venema has demonstrated that the display is not only scalable, but that it can be done in an efficient manner. In version 0.85b, the screen can be selected before the emulation OR during the emulation. The five display sizes which he has provided are:

Size 1: 512 x 256  
Size 2: 512 x 341  
Size 3: 768 x 512  
Size 4: 1024 x 683  
Size 5: 1024 x 768

The great news is that 'Size 3' actually fills the usable screen space (9.5"x6.75"; or, ~11.75" diagonal on a 14" VGA monitor). I have to mention that the first several times I switched to 'Size 3' that it was just a little larger than the available screen space. Initially, I would estimate that 'Size 3' was being displayed as one line higher than a normal screen, and one character wider.

This over-fill stopped after I added the CWSDPMI.EXE file to the same directory as the LAYW.EXE program. Coincidence? I'm not sure. I haven't removed the file to verify this.

'Size 4' & 'Size 5' definitely over-fill a standard VGA screen. 'Size 1' is similar to the image created by SMSQ, but the vertical is slightly compressed due to the "top line" being occupied by the control bar (7.5"x3.75"). 'Size 2' is taller than the standard QLAY (0.85a) display and the SMSQ display (7.75"x5")

The font quality varies, with the font created in 'Size 3' as best described as being a compromise (1/4" font height). The font in 'Size 1' & 'Size 2' are similar to CSIZE 0,0 (1/8" & 3/16" font height, respectively); and, the font in 'Size 4' & 'Size 5' appear to be similar to CSIZE 2,1 (5/16" & 3/8" font height, respectively).

As one might suspect, there is a price to pay for the scalability of the screen display with the larger displays using more of the host's resources. Ergo, the larger the display selected, the slower the emulation.

As I mentioned, the size can be switched at any time during the emulation when using version 0.85b; so, the smaller size can be selected when greater speed is required, and to the full screen mode at other times.

### **Task Switchable**

Both versions are easily task switchable from within Win95 by using either the ALT\_ESC or the ALT\_TAB key combination; or, the pointer arrow with QLAYW.EXE if your task bar is visible. Of course, use the CTRL\_ESC

key combination to load other programs; or, the pointer arrow with QLAYW.EXE.

QLAY 0.85b is unstable if other programs are dormant in the background; but, Venema assures me that this problem will have been fixed with subsequent releases.

### **Minerva Compatibility**

Only the older (JSL1) Minerva code works. Even so, I was not able to load the Minerva ROM image that I made. I will try this again at a later date.

### **QLAYT**

QLAYT.EXE is currently an essential DOS utility for effectively using QLAY. The QLAYT.EXE is found on earlier ZIP files, so you should ensure that if you are downloading from Venema's web site

There is a QLAYT program which I believe is for use with LINUX, and this should not be confused with the QLAYT.EXE program. QLAYT allows you, first and foremost, to add programs to the active directory file (QLAY.DIR).

With the anticipated addition of QDOS floppy access, you should be able to add files to your hard drive directly from floppy. The most important thing to know is that if you want to INSERT a file into the QLAY dir, the DOS syntax is as follows:

```
C:\> QLAYT -i QLATter -d 31790
```

QLAYT switches are case sensitive. Note the file being inserted into the existing QLAY.DIR file is "QLATter" which has a size of '31790 bytes'. The file size on some files does NOT need to be declared.

### **Limitations**

Some of the documentation presumes you know more than I do. The QLAY.RC file requires the syntax be written a bit differently than in the past.

TK2\_EXTensions must be provided by the user.

QLAYW.EXE is designed to run without the CWSDPMI.EXE file, but it appears to be more stable when it is accessible by the QLAY.RC file.

Sub-DIRectories are not currently supported.

While I don't know how to use the virtual "mdv" drives for storage (this is probably something that I should learn how to do in the near future because I believe these can be used as effective substitutes for sub-DIRectories), and QLAY's I/O is still limited. While floppy access should be implemented by the time you read this, QLAY still does not have SERIAL access; but, presumably this will be a future function.

### **Why QLAY?**

I have been told that there is another Freeware, QDOS emulator (WinQL -- written by the author of the emulator that runs on the 68000-based MACs), but, I haven't seen a copy, yet; so, I do not know what limitations exist with it (if any). The question that I am sure that some people will ask is "Why would I want to use QLAY?" (or, any other emulator).

There are actually reasons that QLAY, as tested, is more than adequate for most people who need to use a QDOS emulation. The fact that files are created saved to your hard drive in DOS format may be a benefit for some people because it eliminates the file conversion step. For example, I recently prepared a manuscript which began in Quill, but which I later imported into Works for

formatting and printing; and, I was glad for the better fonts available through Windows (having said that, I have to admit that I have not used or seen any of the output generated by the programs from PROGS; so, I don't know what I am missing with regard to QL-to-printer output).

If you have a proprietary program that was written to run on QDOS, you no longer need to be concerned with porting it over to run on a PC since you can simply run it using the QLAY emulation. Or, for example, if you do not have the PC version of the PSION Suite, but prefer to use DBEasy (as I do) for your database needs, then QLAY will allow you to continue to do so.

If a program will run on a standard QL, then more-than-likely, it will run with the QLAY emulation; but, the exception might be older games which require a key. Unlike the QPC emulator, all versions of the TURBO compiler work. Unlike the QPC emulator, QLAY is (currently) Freeware.

All in all, I think that QLAY is excellent QDOS emulator for a person with a suitable host PC who has a need to access existing QDOS programs and files

**HAPPY TRAILS,  
AND COMPUTING, TO YOU ....**

## UPDATE

*Robert Hartung*

I have gotten several inquiries about the previous QPC articles, especially concerning the SMSQ/E environment in which it runs. Since I have used SMSQ/E only with QPC, and not with systems such as Atari, QXL, or Gold Card, I don't know what differences one would find with these versions, if any.

Recently I updated my QPC to v1.42, which is the current version as of April 8. This also included an update of SMSQ/E to v2.88, since they are both on the one master disk. These updates are free to registered users, requiring only the return of the original master disk with three IRC's (international reply coupons). If a revised manual is also desired, add another five IRC's, or DM 10 if you purchased QPC from Jochen Merz Software.

The most obvious improvements in the QPC/SMSQ/E combo are in speed. As compared to my original versions, the floppy disk and hard drive access is up to nine times faster. The screen driver (depending on your graphics card and the SW in use) now supports VESA, QL (512 X 256 mode), EGA, VGA, SVGA, up to 1600 X 1200 pixels, at up to twice the former display speed.

Note that, as in PC mode, higher display resolutions produce finer definition but smaller actual window size, except when used with current versions of programs such as ProWesS and Text 87 which allow configuration of display fonts. The WINDOW #0, #1, #2,x,x,x,x command may be used to change BASIC window sizes, but programs such as the old PSION suite and XCHANGE were written with the QL screen size of 512 X 256 encoded into them and so will default to this.

There is a dramatic improvement in the time required to format a WIN partition (actually a very long DOS file) on a hard drive or removable cartridge drive. What once took an hour or more now is done in only a few seconds! In fact it takes longer to type in the two commands to unprotect and then format the WIN file than it does to actually create the partition. Direct access to and from other DOS files is now enabled in QPC.

In my previous QPC articles I omitted a command line in the DOS AUTOEXEC.BAT file which will speed up booting and termination of the emulator by a few seconds. Following the PATH definition line, insert this line: SET COMSPEC=d:\DOS\COMMAND.COM. Make

d:\DOS the drive:\directory where COMMAND.COM is to be found on the hard drive rather than on the boot floppy, to which it would otherwise default.

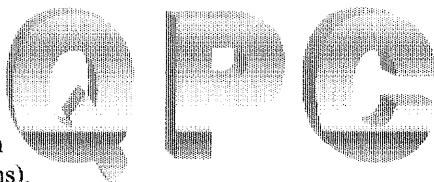
I have also gained some experience in running the TEXT 87 Plus4 and Perfection word-processors in QPC. Although I do not have the latest versions of either, both seem well-behaved. I tried a 1985 version of Eddy Yeung's

EDITOR. While I have not used its code-compiling features, the multi-tasking and line-editing seem to function OK.

Freddy Vacha of Digital Precision recently announced in QL Today that an upgraded version of Perfection is available this spring. It is able to take better advantage of the enhanced screen resolutions enabled by the improvements in the QPC/SMSQ/E combo. He also said that the Turbo compiler and Toolkit are being upgraded for better compatibility with Minerva SMSQ and SMSQ/E. According to the QPC manual, depending on the speed of the CPU on the host PC, there is little or no speed advantage in using Turbo or QLiberator-compiled programs with QPC although the listings may be adapted to do so by removing any code SBASIC doesn't like.

In other QL Today news, a QBranch ad in the March/April issue announces that a 500-page SBASIC/SUPERBASIC Reference Manual is now available. It is a guide to BASIC programming that brings together all the command structures now provided in QDOS/SBASIC/SMSQ. It includes three disks of PD toolkits, example procedures, and an electronic index. Inquire of QBranch for pricing details. They have their own web site at <http://www.qbranch.demon.co.uk>.

Last but not least, at the QL meeting in Eindhoven, Germany, last November, a working prototype of the Q40 was demonstrated. This is a mainboard which simulates or replaces all QL hardware in a configuration that fits an industry standard case and power supply. Presently it is using a Motorola 68040 microprocessor, but will have the 68060 with 0.42 micron gate technology when it is in production. It will run under the SMSQ/E environment, with high color/resolution graphics, and will accept a standard keyboard. Extension slots are provided for an IDE/IO card to use with 2 HD floppies, 2 IDE hard drives, 2 serial ports, a parallel port, a joystick, CD ROM, and up to 32 Mb DRAM SIMM memory.



As I write this, Kevin Costner's movie "The Postman" has just taken the Razzie Awards (from the Golden Raspberry Foundation) in every major category: worst movie of 1997, worst director, worst screenplay, worst song, worst actor. With that as the type of inspiration that gets creative juices flowing, consider this as a topic for discussion in the pages of the newsletter: the all-time worst T/S software. This is certainly the point in time appropriate for identifying such software, being far enough past most new software releases that it is unlikely a later winning candidate will come along, yet close enough that most of the past releases are remembered (by someone) and can be brought to light. Only commercial software is eligible; anyone can write a rotten program (just as anyone can make a rotten home movie), but it takes both poor skills **and** a big ego to produce a piece of trash and want other people to pay money for it.

I was going through old T/S1000 software this weekend, and came upon one cassette (date unknown) from "Software Development Associates" of Phoenix, Arizona (which I assume was just some guy cranking out tapes from his garage). I have no other example of programming from these folks, but this one, called "SDA Games One" (grandly part numbered "G101"), includes five programs and hence presents something of a sampling from the company. Most are 2K, and I know one cannot expect too much from early 2K software (and these programs do not exceed expectations on that score). However, my candidate for truly bad status is the last program, called "Battlecard", which requires 16K and hence does not have the "only 2K" excuse.

The first thing you notice in Battlecard (other than the fact that it did not autorun when you loaded it) is that the author did not bother to make sure words stayed together at the end of each screen line. (In this, it is consistent with the other programs on the tape.) For instance, the fragment "SUIT-NUMBE" ends up on one line, and the remaining "R" on the next. Since this program was written in simple BASIC, it is easy enough to go in to fix that, and having done so I know that it doesn't cause an out-of-memory error or other unfortunate side effects, so— why didn't the author take the 2 minutes needed to fix it before the program was released? Surely he at least **looked** at the finished work before it went out the door? Surely he was not simply typing this program in from a book of BASIC programs

written for another unit? Surely he knew enough about BASIC programming himself to know how to fix the problem? Did he just not care, or did he not think anyone else would notice?

The program asks, "Do You Want Directions?" As with every other program in the universe, I pressed "Y" and entered it. The program responds with, "Yes Or No Please." The programmer couldn't figure out how to make do with a one letter input? If he needed a full "Yes" or "No", why didn't he specify that in the question ("Do You Want Directions (Yes/No)")? Not an auspicious start.

But the core problem with this game is the whole concept. To quote from the written instructions:

"After pressing RUN the screen goes blank and stays that way for approximately 2 minutes. Then the game begins. The game consists of a deck of 52 cards, in which the computer randomly selects two cards, one for you and one for itself. The higher of the two cards wins. There are 26 such "battles" per game. The computer keeps track of who won each battle, not counting ties. There is no response necessary from you. At the end of the game, a display on the screen gives the final score and tells who won the game."

The game is as good as its word. After a very long screen blank, it pops up with a message like:

"Yours: D-9 Mine: S-Q I Win. You Have 0 I Have 1"

No graphics of any sort, just the above text, using S, C, D, and H as abbreviations for Spade, Club, Diamond and Heart respectively. After a PAUSE 500 (about 9 seconds), it blanks again momentarily and comes back with something like:

"Yours: S-A Mine: C-4 You Win. You Have 1 I Have 1"

And so on. Sure enough, absolutely no input is needed from the user! The computer simply goes through all 26 "battles" and announces the winner, then says "Thanks For Playing", and ends the program. Thanks for playing **what??** The user doesn't do a thing. As dull as this game would be if a kid did it manually, by himself, with a deck of cards, isn't it **twice as boring** to just sit there watching the computer play itself? Do you suppose any user ever ran this program more than once, unless it was to make absolutely sure it was as bad as he thought it was the first time?

To be up-front with the awards committee, I must concede that the program has no "bugs"; it produces the correct 52 cards, with no 13 of Spades nor duplicate Aces of Clubs. But then again, functioning correctly is probably easy to do when you don't have to worry about pesky users inputting anything. So, I hereby nominate "SDA-Battlecard" as "Worst T/S1000 Program, 16K Division". I hope my fellow users will identify and submit other worthy candidates, for all species of T/S computer, so we can eventually award our own "Razzies".



## Surfing The Net With The TS-2068

by David Lasso

In this article, we discuss several services, provided to us in subscription form, by a computer system, that speaks UNIX. We have something to say about telnet, email, mailing lists, the web, usenet, gopher, and ftp.

After using telnet to establish computer contact, the rest of those *programs* communicate off-line. On-Line communications (in real time) use talk, irc, or muds. First, we use the telephone, to *connect* with our Internet



provider, in order to show the UNIX prompt, \$, on the screen, TELNET. TELNET is a facility, so fundamental and so old in the history of accessing computers, as to *answer the phone* whenever we make our *initial* call to the Internet service. Then, of course, TELNET serves to **connect** us to whatever **other** computers on the Internet, that we desire to talk to. Boy, this must really *kill* the guys at the telephone company, as they try to get a piece of each such action!

**H**ere is how it goes for me. I call 520-918-4700, which responds with AZSTARNET and a request for a **user name**. After that, it asks for my **password**. After **connect** appears, the banner/main menu is displayed. Should I type TELNET user-name@computer-name, then a brief pause ensues, based upon Internet traffic, followed by a response with a request for a **user name**. After that, it asks for my **password**..., as above. From the foregoing, *you* should see, that using TELNET is like calling a BBS, e.g., SOL BBS at 520 882 0388 with GUEST as a user name and GUEST as a password. By a careful reading of the above, you should **ALSO** see, that each TELNET site differs in logon procedure, as much as it differs in general content. This includes the initial call to our Internet service! Anyway, by going through the above steps, you have gained **ACCESS** to the Internet and/or **ACCESS** to whatever other site on the Internet, you might have addressed.

#### ELECTRONIC MAIL

We use program MAIL, in order to **SEND** mail over the Internet, using the 2068 computer and a shell account, in order to access the web. I don't know all the details, but MaxCom software does not seem to entirely emulate the VT100 terminal, because we cannot go **UP** on the screen and, hence, we are limited to **line editors**. Shell accounts usually use PINE and PICO to send mail, but, alas, they are full-screen editors. But, they replaced MAIL, which has been left as a rather efficient line editor, and MAIL sure does a good job with our 2068 ! Suppose we are looking at the UNIX prompt, \$, on the screen. Then, we type mail user-name@computer-name , in order to set up the computer, for **SENDING** the message which follows, to the user with user-name user-name at the computer, bearing the name computer-name.

**N**ext, my cursor jumps to the start of the next line, which is **BLANK**, of course (no full-screen editor!). I enter the message, line by line (back-space editing **only**.) I terminate the message, by typing only . on a line and pressing **ENTER**. The message can also be terminated, by typing ^D or ^d on a blank line, where ^ denotes first pressing the **CONTROL** key, **CAPS-SHIFT/EDIT** on the 2068 with MaxCom. When the UNIX prompt, \$, subsequently appears, the message will have been **SENT** to the addressee, user-name@computer-name. Now, in order to check for your *own* email, simply type mail and press **ENTER**. A response of **NO MAIL** means an empty mailbox. Otherwise, **FROM: ...** will appear, followed by any first email message in your mailbox. After listing an email message to you, the prompt, **?**, will appear. This initiates a **REPLY**, should you type **r** and press **ENTER**. This also **DELETES** that particular letter from your mailbox. In order to **DELETE** the letter **only** (without a **REPLY**.) then simply type **d** after the prompt,?

#### MAILING LISTS

These are something we can join, in order to keep our electronic mailboxes filled with interesting stuff. For example, **OPEN** your download buffer, in order to get an ASCII copy of the following session, where you get the UNIX prompt \$ onto the screen, and then **ENTER** the line: lynx http://scwww.ucs.indiana.edu/mlarchiv. Don't forget to close the download buffer, when finished! It now contains information on how to join (or leave) mailing lists, each devoted to a specific special interest group. Whenever a member submits email to the mailing list, then it is immediately sent to **all other** members of the group. So, all you need to know is how to send and receive email. Also, the address of an interesting mailing list to talk with would be helpful. :-)

#### FILE TRANSFER PROTOCOL

ftp is the name of the UNIX program, for implementing FTP. First, get the UNIX prompt, \$, onto the screen. **ENTER** ftp alone, followed on the next line by open rtfm.mit.edu. This last will be in response to the ftp prompt, ftp>, resulting from the initial entry of ftp. Alternatively, we can connect to the remote host, rtfm.mit.edu, by entering the line: ftp rtfm.mit.edu The ftp facility can be terminated, by typing quit, in response to any ftp prompt, ftp>. Use the get command, to download any file to your current directory. Of course, you should already have set up a directory on the UNIX system, where you can store your download files. Do this, *before* you use ftp to access the remote directory. Furthermore, there are simple commands like cd, to Change to the desired remote Directory. Now, we can up- and down-load all kinds of files, as the Internet machine with UNIX is somewhat more sophisticated than our 2068 system with MaxCom. Just be aware, that downloads to *our* 2068 system are limited to ASCII transfers.

#### USENET (newsgroups)

The UNIX program for accessing USENET is called tin. Now, if you just **ENTER** the name tin then would follow an *endless* sequence of questions, on subscribing to **NEW** newsgroups, each question demanding a **YES** or **NO** answer, followed by an identical question !! So, here is what we do:

**A**t the UNIX prompt, \$, **ENTER** the line tin -q. This will bring up a menu of **all** newsgroups, which you *have* used. You can enter any newsgroup on the list, by **ENTERing** its line number from the list, followed by another **ENTER**. We escape back to the last menu, by entering q. We can keep entering q's like this, till we reach the UNIX prompt. At the UNIX prompt, we can also choose to read a specific newsgroup, say alt.1d on one-dimensional figures, by **ENTERing** the line tin -q alt.1d and, *yes*, the space(s) following tin is **are** critical!

The important thing is the ability to arrive at the UNIX prompt, \$, on the screen. While this is more complicated, than lifting a telephone receiver for the dial tone, this is still a simple task, costs about \$20 monthly, and requires the advice of your Internet service provider. So, when signing up for Internet access, be sure to keep track of the telephone number of the sysop (system administrator!).

#### GOPHIER

Let's explore gopherspace! Sounds like the underground doesn't it ! To do this, we call on a UNIX program, called

**gopher.** While looking at the UNIX prompt, \$, we can type gopher and then press ENTER. This will access any local gopher site, as set up by the sysop. In order to access a specific gopher site say, wiretap.spies.com, then enter the line gopher wiretap.spies.com. Up comes the MENU, most of whose items refer to other MENUs. So, choose an item, by entering its line number, or by pressing the BREAK key, or space bar, till the item be displayed at screen bottom. Then, enter the item, by pressing ENTER. After thus searching the MENUs for your particularly interesting item, enter the item, by pressing ENTER. Next, program gopher will fetch your topic and display the text on your screen, one screenful at a time. So, you can spend all day (or night!) exploring the underworld of gopherspace, using only six basic commands: k (or ^P) and j (or ^N) to move UP and DOWN within a MENU, respectively; ENTER and u to move from one MENU to the next and previous, respectively; and, SPACE (or > or +) and b (or < or -) to page forward and backward through long MENUs, respectively. Should we get lost amongst all these MENUs of MENUs, we can always type m, to escape back to the initial MENU! At the UNIX prompt, \$, we can escape back to the Internet main MENU, by typing stop or ^D or ^d. We terminate the session, by escaping the Internet with ^C at the main MENU!

#### THE WEB

The web is man's latest attempt at a universal communication system. After using the phone to connect to an Internet provider (like using TELNET,) MAILING LISTS offered the first such attempt. Then, USENET followed with a little better access to the web, in order to support newsgroups of common interests (like using message bases and BBSs.) The World Wide Web (www) was developed at CERN in Switzerland, to access massive amounts of Physics information. Thanks to Marc Andreessen and his program, MOSAIC, the WWW degenerated into THE WEB: a complete information system with LINKS, to permit easy jumping from ideas to words to pictures to sounds to ...

Now, Goedel's Theorem, that completeness be tantamount to inconsistency, is surely applicable, here, as there is little consistency on The Web!! LYNX is the program, used to access the web from a shell account. It runs on the Internet computer and furnishes all the above words and ideas of the web. Be that what it may, we presume, that we are looking at the UNIX prompt, \$, on our screen, CRT, or monitor. If you simply type lynx and press ENTER, then you should get the banner for your local Internet system, that you are now using. At banner bottom, enter g and computer-name of the target system. Alternatively, in order to get access to somebody else's site, you can type their computer-name, after typing lynx : lynx computer-name. Of course, it is important to separate lynx from user-name@computer-name (by spaces).

We wish to take this opportunity to announce the opening of a new Message Base on SOL BBS, entitled Advanced 2068 Topics, and dedicated to discussions on developing the ASAPfax faxing facility for the 2068, branch switching on the 2068, and Internet applications of the 2068, in general! The above procedure should result in any site's banner and/or main menu, worldwide!

#### TALK

The talk facility is implemented by the UNIX program, talk. Usage is the same as SOL BBS in TALK mode or in TERM mode. Some people refer to this interchange of ASCII information as CHAT mode. The other person needs a talk facility, which is compatible with the UNIX talk program. It also helps, that they be at the computer, addressed on the Internet. :-) Programs for talk, which are compatible with UNIX talk, are available on the Internet for download at no cost, using anonymous FTP. ENTER the following line: talk user-name@computer-name in order to connect (for FREE) to the person, using user-name user-name at the computer computer-name. If the person be *there and not busy*, then he or she will be paged and asked to respond with a *like* talk command, using your user-name and computer-name. Connection follows, and you can both begin talking. If the person be *there and busy*, then [Ring your party again] will appear on our screen every ten seconds, till either connection be established or we press ^C. Before we try to talk to someone, using the talk facility, always finger them with the line : finger user-name@computer-name. The information from finger should tell us, whether the person be logged in and willing to talk. The conversation can be terminated, when someone hits ^C. Then, the UNIX prompt, \$, reappears. These are like FREE phone calls, all over the world at only \$20 monthly! Use it or lose it, *but do not abuse it!*

#### INTERNET RELAY CHAT

This is the ultimate TALK facility, talk, talk, talk, ..., talk. Once on board, everything you type is printed to everyone else's screen, and you see everything typed by everyone else! Private messages, can be sent and/or received to/from any online user. For a list of the (thousands of) users, online, type /LIST. Anyway, in order to access this facility, get the UNIX prompt, \$, on the screen, and ENTER irc. My local access is to EFNET, which has users from over nineteen countries (foreign languages?). For example, there is a guy from downtown Belgrade, Yugoslavia, broadcasting on student activities there. He uses an irc channel! Also, some guy is listed as silversto, which is my birth name. Wonder what's on his mind ...! Most exchanges are in English, but I saw some Spanish lingo in the LIST!

#### MUD

Multi-User Dungeons is a GAME program. No, it's much more, since it provides a game environment among several players. That's how muds are all the same. Mud's are all different, by providing different environments, relating the players ... differently! You are going to have to ask your friends, about which muds to choose!

OK, Abed! I have just sent you an article on TS2068 applications to the Internet, submitted sometime last year, it has been corrected and updated. Anyway, the 2068 was used all the way. I found the article on the APPLE, ported it over to the 2068, edited it with MSCRIPT and sent it to the Internet via the 2068! So, the 2068 has some life left for the second millennium. The problems were worked around, by SAVEing the text file to a *clean* part of the disk, multiple tries. Basically, there seems to be a synchronization problem at 1200 baud

# How to Hack on The 2X-Spectrum *Les Cottrell*

## PART 3 - EASY LOADING SYSTEMS

So far, you've worked out the all important basics of hacking. However, there is another, equally important facet of hacking games that you should know about.

Few games these days are unprotected. They feature "protection systems" which prevent you from breaking into a program and fiddling about with it. The difficulty level varies, but in general they use two concepts - headerless loading and decryption.

Before we do anything, I should point out that you're going to need a disassembler from now on. The machine code listings in this book use Devpac's notation, but 007 Disassembler's notation is almost identical, except it uses decimal instead of hex. Hopefully, you shouldn't get lost if you use

Anyway, for now, we'll forget about decryption and concentrate on Headerless loaders, since they're common to all protection systems.

A Headerless loader will look something like this:

```
DD 21 XX XX    LD IX,XXXX
11 XX XX      LD DE,XXXX
3E FF         LD A, #FF
37            SCF
CD 56 05      CALL #0556
```

...where XX can be any number from #00 to #FF. IX is another register similar to HL, but has slightly different properties, which you don't need to worry about right now. The value put into IX is always the start address of the block to be loaded, and the value put into DE is always the length of the block to be loaded. So the routine works exactly like loading and saving bytes in BASIC.

The only differences you should ever find are that the CALL is to a different address (#0556 is the ROM loading routine, so other CALLS are to turbo loaders in RAM), the LD A,#FF has some other value loaded into A instead, or is missing, or the SCF is missing. Basically, if you see DD 21 XX XX 11 XX XX in a protection system, you can be pretty sure it will be used to load something.

Now we know how a headerless loader works, let's try and hack a real one. As an example, I've chosen Ethnipod, which was on the May 1991 YS Covertape.

First of all, load up STK at any address (I'd suggest 32768, but you don't have to) and press Z to BLOAD in the BASIC. Then use STK to list the basic, and you'll get the following:

```
10 BORDER 0: PAPER 0: INK 7: CLEAR
24999: LOAD "" CODE
65000: RANDOMIZE USR 65000
```

Therefore, we should type in CLEAR 24999:LOAD "" CODE 65000 and restart the tape. When the OK message appears, stop the tape, load up your disassembler, and have a look at address 65000 (#FDE8). Here's a complete disassembly of the code you'll find there.

```
FDE8 21 00 40    LD HL, #4000
FDEB 11 01 40    LD DE, #4001
FDEE 01 FF 1A    LD BC, #1AFF
FDF1 36 00      LD (HL), #00
FDF3 ED B0      LDIR
```

LDIR is a command we haven't met before, but it's

easy to understand. It's a copying routine. The start address of the block you want to copy is put in HL, the length of the block you want to copy is put in BC, and the start address of the area of memory you want to copy it to is put in DE. So, in the example above, the area of memory from #4000 is copied to #4001 for #1AFF bytes. In short, this routine is overlaying each address in this area of memory with the byte of the previous address.

The LD (HL),00 means that byte #00 is put into address #4000. Therefore, the whole of the memory from #4000 to #5AFF is filled with 0. In case you didn't know, the whole of this memory is the screen memory, so this bit of code is what makes the screen black when loading the game normally. If you want, you can change the byte at #FDED to #00 to give LD DE,#0001, so the contents of the screen memory are copied into the ROM (except that they aren't because the ROM is a read-only memory and you can't write anything into it.) This will stop the screen going black. You don't actually need to do it at all, but there we go. Continuing the disassembly:

```
FDF5 11 00 1B    LD DE, #1B00
FDF8 DD 21 00 80 LD IX, #8000
FDFC 3E FF       LD A, #FF
FDFE 37          SCF
FDFF CD 56 05    CALL #0556
```

This portion of code loads in a block of code, with the start #8000 and the length #1B00.

```
FE02 3E 00      LD A, #00
FE04 D3 FE      OUT (#FE), A
```

This part of the code includes an OUT instruction, but OUT in machine code is exactly identical to that in BASIC. So, this routine is basically the equivalent of OUT 254,0 in BASIC. If you don't know what that does, it sets the border to black.

```
FE06 11 00 40    LD DE, #4000
FE09 21 00 80    LD HL, #8000
FE0C 01 00 1B    LD BC, #1B00
FE0F ED B0      LDIR
```

This is another LDIR, and it moves the code from #8000 to #4000 for #1B00 bytes. In other words, it copies the screen picture into the screen memory so you can see it.

```
FE11 11 60 9D    LD DE, #9D60
FE14 DD 21 B4 5F LD IX, #5FB4
FE18 37          SCF
FE19 3E FF       LD A, #FF
FE1B CD 56 05    CALL #0556
```

This part of code loads another block, with start 5FB4 and length 9D60.

```
FE1E C3 C7 61    JP 61C7
```

This part of the routine jumps to the game itself once it is loaded.

To hack the game, replace the C3 at FE1E with C9. This will put a RET at the end of all the code, so the loader will return to BASIC when all loading has finished.

When the OK message comes up, you can hack the game as you've done with unprotected games. If you load STK into address #6000 (24576 decimal), and hack the game using a forwards trace, you'll eventually find that changing #EF09 to 0 gives you infinite lives for player one. Then to start the game, type RANDOMIZE USR 25031

(61C7 in decimal), and bingo!

To write a hack, we need to rewrite the BASIC loader, but make the modifications so we can put POKES in:

```
10 CLEAR 24999
20 LOAD "" CODE 65000
```

This comes directly from the BASIC loader and loads the small headerless loader code.

```
30 POKE 65054,201
```

This means that control will return to BASIC when all the headerless code has been loaded

```
40 RANDOMIZE USR 65000
```

This starts off the headerless loader.

```
50 POKE 61193,0
```

This is the infinite lives POKE

```
60 RANDOMIZE USR 25031
```

This starts the game itself. Easy when you know how!

Now we know how a simple headerless loader works, let's crack a turboloader. There are loads of YS covertape games which have a suitable loader, but I'm going to choose Pixy the Microdot 2, although you'll find that any YS game which uses blue, black and magenta stripes when loading is almost identical.

First of all, load up STK at address 58550 (you'll find out why later on), to find out what the BASIC loader has to say, using the same method as with Ethnipod. It starts running at line 0.

```
1 BORDER 0:PAPER 0:CLEAR 64999:LOAD
"" CODE
2 RANDOMIZE USR 65146
20 CLEAR 64999:LOAD "mc" CODE:LOAD
"pixldsy"
CODE:SAVE "t:":SAVE "PIXY" LINE
1:SAVE "x"
CODE 65146,200:LOAD "screen"
SCREEN$:RANDOMIZE
USR 65000
```

The BASIC starts at line 1. The commands should be obvious to you. Type CLEAR 64999:LOAD "" CODE, start the tape, and load in the first block of code. Stop the tape when the OK message comes up.

Now load your disassembler and examine the code at 65146, which is FE7A hex.

```
FE7A F3          DI
```

DI is short for "disable interrupts". What are interrupts, I hear you ask? Well, imagine you're watching TV when suddenly, someone says "We interrupt this program to give you an important news flash!" Then, after the news flash, the program you were watching resumes. Well, computer interrupts work in exactly the same way. In fact, every fiftieth of a second, a program is "interrupted" by the computer, which then checks to see if you're pressing any keys, and resumes the original program. The command DI simply stops this happening, and your program continues without any interruption! This makes the program run faster. However, you CANNOT get back to BASIC by a RET command, because the computer won't be checking the keyboard, and so it has effectively locked up. To get round this, you must execute the command EI (enable interrupts) first, so control can be resumed. Don't worry about doing this now, though.

```
FE7B 31 60 61    LD SP,6160
```

This is a new instruction. SP (short for "stack

pointer") is a 16-bit register, like BC, DE and HL. However, it's far more important as far as BASIC is concerned. In machine code, there are two ways of storing numbers. The first, using memory locations, we've already come across. However, there is another method by storing numbers on what is called a stack. Think of a stack as a big spike on which you can push pieces of paper with information on. Then, later on, you can take them off the stack and use them. If you think about it, if you put the numbers 1, 2 and 3 on the stack, in that order, you'll have to take 3 off first, then 2, then 1 (think about it). And it's the same in machine code. There are instructions which enable values of registers to be put on the stack, and which enable the value on the top of the stack to be taken off and put in a register.

The stack, like everything else, has to go somewhere in memory. The SP (stack pointer) register gives the address of the top of the stack. So LD SP,6160 will mean that the stack is to start at address 6160.

This is bad news if you want to return to BASIC, because the Spectrum's ROM program puts lots of information on the stack, so if you change the stack pointer, it's going to receive garbage when it takes all the values off what it thinks is the stack. And that, of course, will mean a crash. So the general rule is **leave the stack pointer alone!**

You can change the value of the stack pointer using CLEAR from BASIC. If a machine code instruction has LD SP,XXXX, you can type CLEAR (XXXX)-1. So here, we should CLEAR (#6160)-1 = #615F. Bear in mind that the value will have to be in decimal, which is 24927. So exit from STK, CLEAR 24927, and go back into it again. This will mean that later on we can do the EI / RET as described above. Then you have to remove the LD SP instruction, which is most easily done by changing FE7B to 21, so it reads LD HL,6160. This is harmless in this case.

Carrying on through the code....

```
FE7E DD 21 00 40    LD IX,4000
FE82 11 00 1B       LD DE,1B00
FE85 CD 97 FE       CALL FE97
```

As you can probably see, this loads a headerless block, the loading screen, in fact. However, you'll notice, as I said earlier, that some of the other commands (LD A,#FF and SCF) are missing, and the CALL goes to a different address. This is because it's a turboloader.

```
FE88 DD 21 60 61    LD IX,6160
FE8C 11 4B 83       LD DE,834B
FE8F CD 97 FE       CALL FE97
```

This loads another block, start 6160 and length 834B. This means, that all the memory from 6160 to E4AB will be overwritten. Fortunately, you loaded STK into address 58550, which is E4B6 hex, so it won't be overwritten. Clever, eh? Meanwhile....

```
FE92 30 F4          JR NC,FE88
```

Something I haven't told you yet is that after a headerless load, a JR NC will result in that JR if there is a tape loading error. So, if there was a tape loading error in loading this game, the JR NC,FE88 would be executed (so that computer would try and reload the block).

```
FE94 C3 60 61       JP 6160
```

This starts the main program running.

To crack the loader, therefore, POKE FE94 with FB (for EI) and FE95 with C9 (for RET), along with the

modifications I've already told you about. Then RANDOMIZE USR 65146, and restart the tape (it is possible that you didn't stop the tape quickly enough the previous time, so you'll miss the turboload header, in which case wind back just before it). When the game has finished loading, an OK message will appear.

And that's it! Well, actually it's not, because the game is actually compressed, and needs to be unpacked first. Don't worry, because it's easy to hack. Go into STK again, and look at address 6160. You're looking for a JP instruction to the game, which is what is executed when the game is unpacked. You'll find it at 61A3. So POKE 61A3,FB and 61A4,C9 (for an EI / RET), and RANDOMIZE USR 24928. Wait a few seconds until BASIC returns. And there we are - you've cracked the loader!

You might be wondering how you can tell that the game is compressed. Well, there are two things. Firstly, the JP from the loader (6160) is to a very low address in the usable RAM (which only starts at 5B00). But more noticeable, you won't be able to do a forwards trace or a backwards trace until you run the decompressor. In fact, in general, if you think you should be able to forwards trace or backwards trace a game for infinite lives, and haven't overloaded any important code with a disassembler, but nothing happens, it's worth looking at the start of the code executed and seeing if there's a JP a bit later on to a completely different address.

So now, perhaps, we should write a complete hack for the game.

```
10 CLEAR 24927:LOAD "" CODE
```

This is from the BASIC loader and loads in the first block of code. We've changed the CLEAR though, so the

stack is in the right place.

```
20 POKE 65147,33
```

This changes the LD SP,6160 into LD HL,6160 so the SP isn't tampered with.

```
30 POKE 65172,251:POKE 65173,201
```

This changes the JP 6160 to an EI / RET so control will return to our hack once the game has loaded.

```
40 RANDOMIZE USR 65146
```

This starts the game loading

```
50 POKE 24995,251:POKE 24996,201
```

This changes the JP 86CE to an EI / RET so control will return to our hack once the game has decompressed

```
60 RANDOMIZE USR 24928
```

This starts the game decompressor.

```
70 POKE 28402,0
```

This is the infinite lives POKE, which you'll find out when you do a forwards trace on the uncompressed game.

```
80 RANDOMIZE USR 34510
```

This is the start of the game.

Now that you've done that, why not crack another game which uses the same loader? They're nearly all the same, except some of the JP addresses will be different. And then when you've done that, why not have a look at some other headerless loaders - most games by Codemasters use them.

You will find, however, that you will sometimes have to overwrite some of the memory with your disassembler. There's no easy way to tell where it should be, I'm afraid, so you'll have to take pot luck. If your forwards trace and backwards trace are both unsuccessful, try loading the disassembler elsewhere in memory, or look to see if the game is compressed.

## MaxCom

*by David Lasso*

The Principle Breakthrough in the development of MaxCom was finding the proper code for automating the modem initialization. Thus, we go from a disk load to a ready BBS, by just pressing "I" at the Main Menu! As received from Larry, you have to enter TERM Mode and then enter both atx1 and ats0=1, waiting for an OK from the modem, that the strings were received properly.

Well, for this impatient button-pusher, there had to be a better way. So, we finally looked at the way Larry entered the telephone number, in order that the modem AutoDial the number. It was via an ATDT command: PRINT #7; "ATDT15208823972 ". The final two spaces are required, in order to guarantee that the last couple of numbers be received intact by the modem. We have to put some sort of time delay in between the two strings, because the 2068 is a little too fast for the ATARI modem. Can you beat that? PRINT #7; "atx1 ": PAUSE CODE " ": PRINT #7; "ats0=1". The above insights serve as a nice complement to the other developments in MaxCom, such as assigning TERM mode and all local, bookkeeping work to TERMax, leaving ONLY five entry points in MaxCom! BTW we have succeeded in freeing up a grand total of 1578 bytes of RAM!

Here is the Main Menu for the extended version of

MaxCom, which runs on the Systems Oriented Language Bulletin Board System. Since the 2068 is so memory-hound, we have been wracking our brains for the last (and first) two years of operations for neat ways of acquiring memory. Well, we first broke out all the local operations into a "terminal" version, TERMax. And, we last decided to drop terminal mode entirely from the BBS software, MaxCom. We still access terminal mode in MaxCom, but Only by the caller's choosing talk mode at the BBS main menu. Otherwise, we need terminal mode only to initialize the modem with "atx1" and "ats0=1".....

The Breakthrough came yesterday, when we figured out how to send those modem commands as part of an initialization string, by talking to the modem on channel 7. So, two years of operations have left us with the need for only five entry points for MaxCom. We backup MaxCom to the disk on the current drive, by pressing "u" in MENU mode. We SEND the initialization string to the modem, LOAD the general information message base, and ENTER BBS mode, by pressing "I" in MENU mode. We hang up the phone, when necessary, by pressing "h" in MENU mode. We CATalog the current drive, by pressing "c" in MENU mode. We quit back to RAMdisk, by pressing "q" in MENU mode. Oh, yes, we select a current drive by

pressing "0", "1", "2", "3", or "4", while in MENU mode. Duplex is still toggled, when in TALK mode, by pressing CAP and "3"....

MaxCom uses 1200 baud at 8 data bits, 1 stop bit, and No parity all the time, when receiving calls to SOL BBS. The parameters are selectable in TERMax only. We sure saved a lot of memory, there ! The buffer works in TERMax only, in order to upload long files by the caller.

Lastly, LINE is still ON or OFF, according as a connection is still in progress, or not, respectively.

### MAIN MENU

Here is the screen image of the AUTOSTART file on RAMdisk. This Main Menu takes 22 lines, as shown. On line #24 is a request "press 0 - g" ..... Now, we tried to store it as a screen string, which is easy to print on the large printer, but line #1 is never saved on my machine, and line #24 is not saved, either. So, we resorted to the small printer, which still gives only the first 22 lines.

- ❖ Option #0 gives the CATALOG of the disk in any of the drives, from 0 to 4.
- ❖ Option #1 LOADs the AUTOSTART file of a disk in any of the drives, from 0 to 4.
- ❖ Option #2 LOADs the autonomous version of MaxCom BBS software.
- ❖ Option #3 LOADs the clocked version of MaxCom BBS software.
- ❖ Option #4 LOADs the un-timed version of MaxCom

terminal software.

- ❖ Option #5 LOADs the timed version of MaxCom terminal software.
- ❖ Option #6 writes messages for a called BBS. The text generated contains no punctuation.
- ❖ Option #7 LOADs an advanced, LarKen-compatible version of MSCRIPT.
- ❖ Option #8 LOADs JFORM by Jack Dohany.
- ❖ Option #9 is a disk copy routine, optimized for speed.
- ❖ Option #a LOADs a routine, for moving the contents of RAMdisk both to and from an arbitrary disk drive, from 0 to 4.
- ❖ Option #b LOADs software, for rebuilding a disk's CATALOG from the disk's contents.
- ❖ Option #c transfers the name of a disk on one drive, to a disk on another drive, from 0 to 4.
- ❖ Option #d creates the name of a disk, OR just changes it.
- ❖ Option #e both reads and sets the online clock.
- ❖ Option #f configures ASAPfax. It also READs the disk.
- ❖ Option #g SENDs a fax via ASAPfax.

David E. Lassov: Sysop

SOL BBS @ 520-882-0388 (data) 520-882-3972 (voice)

emanon@azstarnet.com (email)

2590 N. Jordan DR

Tucson AZ 85745-1132

## RMG List — The Inventory Intended to be Shipped to J. Shepard Will be Updated in the Next Issue

- |  |  |
|--|--|
| 1 Computer-TS- 2068 (2068)(h/w)                        | 1 Chambers-MS DOS To LKDOS ASCII File Converter (2068) |
| 1 Computer-TS- 2068 Complete (Used)(h/w)(2068)         | 1 Byte Power-D.U.S. Utility Disk (Pd)(LarKen)(2068)    |
| 11 Computer-TS- 2068 Computer Only As-Is (h/w)         | 3 Manual-D.U.S. Users Manual On Disk Lkdos (2068)(     |
| 1 Power Supply-2068 15v (Used)(2068)(h/w)              | 1 Bench-Tape To LKDOS McMover W/Header Reader (2068)   |
| 2 Power Supply-9 Volt TS-1000/1500 (h/w)(1000)         | 1 Dohany Lkdos Pd Utility Disk (2068)(s/w)(Pd)         |
| 8 Cable-Cassette/Computer Set (1000)(2068)(h/w)        | 3 Dohany-Smartwatch Software/Docs (2068)(s/w)          |
| 5 Cable-Monitor-TV/Composite (1000)(2068)(h/w)         | 1 Dohany-2068 ROM/Spectrum Emulator Kit/Do-It-Your     |
| 39 TS- 1016 16K RAM Pak (1000)(h/w)                    | 3 Printer-Drivers-Dohany Superdriver W/Gypsy (2068)    |
| 13 Magic Bridge-16K RAM Packs (1000/1500)(h/w)         | 1 Mscript Wp V5.X/Dohany - Disk (2068)(s/w)            |
| 1 Suntronics-16K RAM Pak (Used)(h/w)(1000/1500)        | 2 Basic Tool Kit (2068)(s/w)                           |
| 3 Memotech 16K RAM Pack (1000)(h/w)                    | 1 Clone (2068)(s/w)                                    |
| 1 LarKen-Maxcom Term/BBS Package (2068)(s/w)           | 4 E-Z Key-Upload 2000 (2068)(s/w)                      |
| 2 LarKen-Sequential Filing (2068)(s/w)                 | 2 Slideshow 2068-Slideshow Pgm For 2068 (s/w)(2068)    |
| 3 LarKen-LKDOS Version 3 EPROM (LK/AERCO/RAMex/Oliger) | 2 S&K-The Kruncher (2068)(s/w)                         |
| 2 Modem-Byte-Back MD-68 Assembled (2068)(h/w)          | 2 S&K Express (2068)(FD-68)(s/w)                       |
| 7 Modem-Byte-Back Spectraterm V1.3 (2068)(s/w)         | 1 S&K-Andromeda 3 (2068)(s/w)                          |
| 1 Cable-Serial-2068/Modem (2068)(h/w)                  | 3 ZIP Compiler (s/w)(2068)                             |
| 1 Modem-s/w-Z Term 64 (2068)(s/w)                      | 1 Sincus Pd Library (3 Disks)(2068)(Lkdos)(s/w)        |
| 2 PC Talker Speech Synthesizer (QL/2068)(h/w)          | 1 Vista-Public Domain Disk #1 (s/w)(2068)(Lkdos)       |
| 1 Timex-2068 Cartridge 3 Pak (s/w)(2068)               | 1 Vista-Public Domain Disk #2 (s/w)(2068)(Lkdos)       |
| 2 Timex-s/w On Cartridge (Used)(s/w)(2068)             | 1 Vista-Public Domain Disk #3 (s/w)(2068)(Lkdos)       |
| 7 Timex-Budgeter (2068-C)(s/w)                         | 1 Vista-Public Domain Disk #4 (2068)(s/w)(Lkdos)       |
| 78 Timex-Crazybugs (2068-C)(s/w)                       | 1 Vista-Public Domain Disk #5 (2068)(s/w)(Lkdos)       |
| 104 Timex-States & Capitals (2068-C)(s/w)              | 1 Vista-Public Domain Disk #6 (2068)(s/w)(Lkdos)       |
| 1 EPROM-Gesso PCB Complete (2068)(h/w)                 | 1 Vista-Public Domain Disk #7 (2068)(s/w)(Lkdos)       |
| 1 Book-Gesso EPROM Programmer Manual (2068)(s/w)       | 2 Novelsoft Suite-LKDOS-Timachine/Artworx/Worx/ZXp     |
| 4 Gesso Wp32 Word Processor (2068)(s/w)                | 1 Omnibus AOS (2068)(LKDOS)(s/w)(Pd)                   |
| 1 LarKen-George Chambers Utility Disk (2068)(Pd)(s/w)  | 1 Profile +5 (2068)(s/w)                               |
| 1 Chambers-LKDOS Disk Utility Package (2068)(s/w)      |  |



- 3 Profile +5 (Has+3)(2068)(s/w)
- 1 Profile +5 (Has Pf)(2068)(s/w)
- 1 Book-Profile 2068 Manual (s/w)
- 2 Profile 2068 (Used)(s/w)(2068)
- 2 Pro/File 2068 (s/w)(2068)
- 1 Arrow-Sounddesign (2068)(s/w)
- 1 Arrow-Word Play (2068)(s/w)
- 1 Arrow-Music Design 2000 (2068)(s/w)
- 1 Arrow-Screendesign (2068)(s/w)
- 4 Multi-Draw 2068 (2068)(s/w)
- 2 Mdm-PC Draw V3.0 (s/w)(2068)
- 3 Machine Code Tutor (2068)(s/w)
- 2 Federal Hill-Handicapper Thorobred (2068)(s/w)
- 3 Federal Hill-Handicapper Greyhound (2068)(s/w)
- 1 Tech Draw Jr (2068)(s/w)
- 3 2068 Printing Press (Greeting/Sign/Banner) On LK
- 1 Zebra-Creative Graphics & Sound (2068)(s/w)
- 1 Zebra OS-64 (2068)(h/w)(s/w)
- 1 Lkw-Makedos64 V2.1 (2068?FD-68)(s/w)
- 1 Zebra Greeting Card Designer (2068)(s/w)
- 1 Z-Print 80 (2068)(s/w)
- 3 Zebra-Icon Library-Nature (2068)(s/w)
- 3 Zebra-Icon Library-America (2068)(s/w)
- 1 Zebra Sign Designer (2068)(s/w)
- 1 Zebra Banner Designer (2068)(s/w)
- 3 Zebra-Icon Library-Holiday #1 (2068)(s/w)
- 3 Zebra-Icon Library-Holiday #2 (2068)(s/w)
- 3 Zebra-Icon Library-Religion (2068)(s/w)
- 3 Zebra-Icon Library-Travel (2068)(s/w)
- 3 Zebra-Icon Library-Animals (2068)(s/w)
- 1 Zebra-Icon Library-Party (2068)(s/w)
- 3 Zebra-Icon Library-Jewish Holidays (2068)(s/w)
- 3 Zebra-Icon Library-Sports (2068)(s/w)
- 3 Zebra-Icon Library-Office (2068)(s/w)
- 3 Zebra-Icon Library-Christmas (2068)(s/w)
- 1 Zebra-Icon Library Pak #2 (12 Sets)(s/w)(2068)
- 3 Zebra-Icon Library Pak #1 (4 Sets)(s/w)(2068)
- 1 Lemke-Pixel Print Plus DTP (2068)(s/w)
- 1 Lemke-Pixel Print Pro (AERCO)(2068)(s/w)
- 1 Lemke-TASWORD Conversion (DTP)(2068)(s/w)
- 2 Lemke-Pixel Sketch/Graphics Editor (2068)(s/w)
- 1 Mountaineer-16 Point Fonts #2 (DTP)(2068)(s/w)
- 1 Quicksilva-3D Strategy (2068)(s/w)
- 3 Quicksilva-Aquaplane (2068)(s/w)
- 1 Quicksilva-Bugaboo (2068)(s/w)
- 1 Quicksilva-Gridrunner (2068)(s/w)
- 1 Quicksilva-Mined Out (2068)(s/w)
- 3 Quicksilva-Quetzalcoatl (2068)(s/w)
- 1 Quicksilva-Smugglers Cove (2068)(s/w)
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- 1 Executive-Hangman (s/w)(2068)
- 1 Executive-Straits of Hormuz (s/w)(2068)
- 2 Executive-Accts Program (s/w)(2068)
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- 2 Timex-Flight Simulator (2068-T)(Used)(s/w)
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- 2 Timex-Math Wizardry I (2068)(s/w)
- 2 Timex-Math Wizardry II (Used)(s/w)(2068)
- 1 Timex-Penetrator (Used)(s/w)(2068)
- 1 Timex-Personal Portfolio Manager (2068)(h/w)
- 4 Timex-Spelling I (2068-T)(s/w)
- 3 Timex-Spelling II (2068)(s/w)
- 1 Timex-Spelling II (Used)(s/w)(2068)
- 6 Timex-States & Capitals (2068-T)(s/w)
- 3 Timex-Word Play II (2068)(s/w)
- 4 Federal Hill-Harness Handicapper (2068)(s/w)
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- 2 Digital-Night Gunner (2068)(s/w)
- 1 Durell-Critical Mass (2068)(s/w)
- 4 Jrc-Diamond Mike II (2068)(s/w)
- 1 Jstg-Portfolio (2068)(s/w)
- 1 Snyder-Civil War Diary (2068)(s/w)(Pd)
- 1 Wilcox-Tarot (2068)(s/w)
- 1 Wilcox-Yacht (2068)(s/w)
- 1 Foote-U.S.A. (2068)(s/w)
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- 5 Grab Bag-TS- 2068 s/w 10 Pak (2068)(s/w)
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- 1 Pi-Piping System Design (2068)(s/w)
- 1 Pi-Continuous Beam (2068)(s/w)
- 1 Pi-Simple Beam Strength (2068)(s/w)
- 1 Pi-Sheet Metal Forming (2068)(s/w)
- 1 Vectorware-Pix Fx (2068)(s/w)
- 1 AERCO-RP/M Master Disk W/Docs (2068)(s/w)
- 1 Omnidisk (Omnicalc/AERCO Converter)(2068)(FD-68)
- 6 Disk File Manager Pd Version (2068)(FD-68)(s/w)
- 3 Emulator-2068 Overlays W/ Z80 Emulator For IBM
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- 1 QL Mailmerge (s/w)
- 3 QL Pd Software Disk (s/w)
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- 6 Printer-TS-2040 Thermal (1000/1500/2068)(h/w)

- 1 Printer-TS-2040 Complete (Used)(h/w)(1000/1500)
- 6 Printer-Alphacom 32 Thermal Printer (1000/1500)
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- 1 Book-QL SuperBasic The Definitive Handbook (J.J)
- 4 Book-QL Series-Word Processing On The QL (s/w)
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- 1 Book-Executive-Archive Master (QL)(s/w)
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- 1 Monitor-12" Rgb QL Vision (Used)(h/w)

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## Terms That All Potential Internet Users Should Know

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With the swift, progressive use of the Internet over the last several years, terms such as the World Wide Web, e-mail, on-line and modems are being used more frequently in our society.

You may want to become more familiar with common Internet language.

The following is a partial listing of terms that can help you to achieve Internet literacy.

**Address**—A unique string of text which identifies the location of a Web page on the Internet. Also known as the Uniform Resource Locator (URL). If you have E-mail, a unique address is also assigned.

**Bookmark**—A feature of Netscape Navigator which enables you to mark Web pages for future use and easy access.

**Chat Rooms**—With the appropriate software, a permanent connection is made inside a chat room (group) and everyone in that room can type messages and questions back and forth to one other. Everyone in the chat room can see what everyone else is writing because it shows up on each person's computer screen. Chat rooms often have themes where people with similar interests can talk. Communication is in real time.

**DownLOAD**—Through the computer, COPY files from another computer to your computer's hard drive or disk. If you have the appropriate software you can access any file.

**(E-mail) Electronic mail**—A system used to send and receive messages electronically. A message is posted until the recipient accesses and deletes it.

**(FAQ) Frequently Asked Questions**—A file containing responses to commonly asked questions that everyone else is tired of answering.

**(FTP) File Transfer Protocol**—A method of moving files across the Net.

**(Gopher)** —A menu-based program that tunnels between different computer networks in search of information.

**Home Page**—This is the page which comes up automatically when a URL address is entered. It's the introduction page to your Web site.

**(HTML) Hypertext Markup Language**—The stuff that World Wide Web documents are made of.

**(HTTP) HyperText Transport Protocol**—A communication standard which ensures every computer accessing the Internet is talking the same language when sending and receiving Web pages.

**Internet**—A collection of networks that connect computers all over the world together using phone lines,

coaxial cables, fiber optic cables, satellites and other means of telecommunication media

**Links**—Text that may appear highlighted or underlined and may also be a graphic (hyperlinks) that enable you to open related Web pages by clicking them with your mouse.

**Lynds**—A text interface used to view documents/files on the World Wide Web.

**Modem**—Stands for modulate/demodulate. A device that changes analog to digital data which the computer can understand. Modems make it possible to use a phone line for computers to talk to other computers.

**MultiMedia**—A collection of technologies including animated pictures, video and sound.

**Net Search**—Conducting a search for information on the Internet through directories such as Yahoo or other search engines.

**Newbie**—A new Internet user; often considered flamebait by unsympathetic Net vets.

**On-line**—Connection giving access to the Internet through a computer with the appropriate software, modem and a Web provider account.

**(POP) Point Of Presence**—Refers to local phone numbers maintained by regional or national Internet access providers.

**(PPP) Point-to-Point Protocol**—A type of access account that gives virtually direct access to the Net.

**Search Engine**—Used to do a net search and typically gives you more listings than a directory. It searches keywords you enter into the search form. AltaVista, Gopher, Excite and Infoseek are all search engines.

**Spamming**—Broadcasting a single message many newsgroups or E-mail addresses.

**Surfer**—A net dude or dudette.

**(TCP/IP) Transmission Control Protocol/Internet Protocol**—A series of rules computers must obey in order to communicate across the Net.

**Telnet**—Communications protocol that lets you log onto another computer from a far distance.

**Web Publishing**—Someone who ensures that the search engines and directories know you have a Web site. Also, making sure your URL address is publicized in places such as your business cards, flyers, and broadcast advertisements.

**Web Provider**—Also called an Internet Service Provider ISP. A local (proxy) or national company which charges a fee to establish Internet communications through phone lines using routers and servers.

**Web Server**—A computer that takes orders from

Internet users and responds appropriately. It makes Web pages available to World Wide Web users. A server process URL and E-mail address requests.

**Web Site**—A series of Web pages linked together that become someone's entire presence on the Internet.

**Newsgroups**—A collection of Internet users meeting electronically to discuss a topic. Messages can be posted on an electronic bulletin board accessible to all those in the newsgroup. **Usenet** is a system of more than 7,000 newsgroups.

**(UNIX)**—A complex, powerful and extremely scary operating system used extensively on networked machines. Best avoided by Newbies.

**(URL) Uniform Resource Locator**—A unique string of text that identifies the location of a Web page on the Internet. The first four letters in each URL is HTTP.

**Web Browser**—Computer program that enables you to use the WWW to find, load and view Web pages. Web

browsers offer easy-to-use point and click environments for quickly accessing information. Examples are Mosaic, Netscape Navigator and Internet Explorer.

**Web Document**—Also called a Web page, a specifically formatted file designed for use on the Internet that enables you to display information to anyone using the Internet. Web pages typically include text, graphics, links and sometimes sound and video clips.

**Web Master**—Someone who creates, maintains and administers the content of a Web site making sure it operates correctly on the software and server side.

**(WWW) World Wide Web**—Also referred to as The Web and W3. A vast series of electronic documents called Web pages that are linked together over the Internet. No single entity owns the Web. The Internet and WWW are often used interchangeably.

Or a sub-network for net-heads who cannot live by plain printed text alone.

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Address on page 2

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Bob Swoger

Address on page 2

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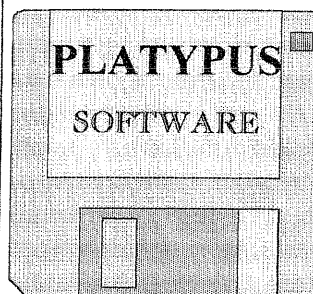
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### **English Office**

**Miracle Systems Ltd.**

**20 Mow Barton**

**Yates, Bristol**

**United Kingdom BS17 5NF**

Tel. +44 1454 883602 Fax. +44 1454 883602

### **Editor**

**Dilwyn Jones**

**41 Bro Emrys**

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